PREFACE

Two years ago it occurred to some of us that the long services of Pandit Madan Mohan Malaviyaji to the country in general, and to the Benares Hindu University in particular, should be commemorated in some suitable memorial, and casting about for the form which this memorial should take, we asked ourselves: Should it be the Senate House? an "Old Boys' Home"? a "Vice-Chancellor's Lodge" or a number of "Special Professorships and Research Scholarships" for the different branches of knowledge which are taught in the University? None of these is ruled out, and one or more of them may yet come before long; but in the meantime his seventy-first anniversary of birth was drawing nigh, and we thought that the occasion could well be utilized for paying our humble tribute of reverence and gratitude to the great patriarch. Accordingly, we decided at a general meeting of the Staff held on the 20th of October, 1930, that a Commemoration Volume be prepared and presented to the *Kulapati* on the happy occasion of his septuagenary. An Editorial Board was at once appointed to invite Panditji's friends, admirers and co-workers, both in and outside the University,—for his services are countrywide,—to contribute articles to the Volume. This Board consisted of the following gentlemen:—

Principal A. B. Dhruva (*Chairman*).

Principal Mahamahopadhyaya Pramathanath Tarkabhusana.

Prof. Syam Sunder Das.

Prof. Gurmukh N. Singh.

Prof. S. V. Pantambekar.

Prof. M. B. Rane.

Prof. N. P. Gandhi.

Dr. A. S. Altekar and Dr. S. K. Maitra } *Joint Secretaries*

The Chairman on behalf of the Board issued a letter of invitation to various scholars and friends to write for the Volume, in which he said

"The services of Pandit Madan Mohan Malaviya to the cause of Education, Nationalism and Religion are well known. The Hindu University, one of the greatest achievements of the 20th century, is a monument of his untiring energy and devotion to the cause of Education. Twice President of the Indian National Congress, he has been associated, as is well known, with every phase of national life and activity in the country. His services to the cause of Religion in general and Hinduism in its broadest sense in particular are equally great. He combines a progressive outlook with a deep regard for the culture and traditions of the past. It is, therefore, but in the fitness of things that his friends and admirers should present him with a Commemoration Volume on the happy occasion of his completing his 70th year."

The response was splendid, and to-day it is my pleasant duty to place before the public a handsome volume of more than a thousand pages, which, I trust, will be found worthy of the occasion.

The papers received, which are in three languages, English Hindi and Sanskrit, have been divided into five sections, Section I dealing with Literature, Section II with History, Politics and Economics, Section III with Religion and Philosophy, Section IV with Science and Section V with Greetings, Appreciations and Memoirs. A number of photographs of Panditji at different stages of life will be found in the volume, as also of Hindu University sites and buildings.

The Editorial Board is sincerely grateful to all the writers who have contributed articles to the volume, in spite of their many engagements, and also to the gentlemen who have given monetary help for printing and publishing the work, and last but not the least, to the two energetic Secretaries who have toiled hard to carry the voluminous manuscripts through the Press. It is fair to add that a few of those friends of Pandit Malaviyaji's, who are now too old or whose engagements due to the Round Table Conference and other causes have been too

heavy to enable them to take part in this work, have expressed regret for their inability, and they join us in congratulating Panditji on this happy occasion as heartily as any of us, who have been paying this tribute.

In conclusion I should not omit to tender my sincere apologies on behalf of the Board to those friends whom we have failed to send the invitation through oversight or ignorance.

Benares Hindu University,
11th February, 1932.

A. B. DHRUVA,
Chairman, Editorial Board.

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महात्माजी का अभिवादन

(२)

२

प्राण है यह नरवीर हमारे लिये
दीर्घायु हो।

विलायत जाते हुए मोहनदास गांधी
७-९-३२

मैं तो मालवीजी महाराज का पुजारी हूँ। पुजारी कैसे स्तुति के वचन लिख सके? जो कुछ लिखेगा उसे अपूर्ण सा प्रतीत होगा। मालवीजी के दर्शन मैंने सन् १८९० की साल में चित्र द्वारा किया था, वह चित्र विलायत में इंडिया पत्र जो मि० डिगबी निकालते थे उसमें था। माना जाय कि वही छवि मैं आज भी देख रहा हूँ। जैसे उनके लिबास में ऐसे ही उनके विचार में ऐक्य चला आया है और इस ऐक्य में मैंने माधुर्य और भक्ति पाये हैं। आज मालवीजी के साथ देशभक्ति में कौन मुकाबला कर सकता है? यौवन काल से आरम्भ करके आज तक उनकी देश-भक्ति का प्रवाह अविच्छिन्न चलता आया है। काशी विश्वविद्यालय के मालवीजी प्राण हैं, काशी विश्वविद्यालय मालवीजी का प्राण है, वह नरवीर हमारे लिये दीर्घायु हो।

विलायत जाते हुए
७—९—३२

मोहनदास गांधी

Section I—Literature

The creature which lives its life, screened and sheltered in a dark cave, finds its safety in the very narrowness of its environment, and the economical providence of nature curtails and tones down its sensibilities to such limited necessity But if those cave-walls are removed by some cataclysm, then either it must accept the doom of extinction, or carry on satisfactory negotiations with its wider surroundings.

The human races will never again be able to go back to their citadels of high-walled exclusiveness. They have been exposed to each other, physically and intellectually. The shells, which have so long given them full security within their individual enclosures, have been broken, and by no artificial process can they be mended again. So we have to accept this fact, even though we have not yet fully adapted our minds to this changed environment of publicity, even though through it we may have to run all the risks entailed by the wider expansion of life's freedom

A large part of our tradition is our code of adjustment which deals with the circumstances special to ourselves These traditions, no doubt, variegate the several racial personalities with their distinctive colours,—colours which have their poetry and also certain protective qualities suitable to each different environment. We may come to acquire a strong love for our own colourful race speciality, but if that gives us fitness only for a very narrow world, then, at the slightest variation in our circumstances, we may have to pay for this love with our life itself.

In the animal world there are numerous instances of complete race-suicide overtaking those who fondly clung to some advantage which later on became a hindrance in an altered dispensation. In fact the superiority of man is proved by his adaptability to extreme surprises of chance, —neither the torrid nor the frigid zone of his destiny offering him insuperable obstacles.

There are some kinds of mental peculiarity which tend to fall more under pathology than psychology, that is to say, which have no universal significance. Such peculiarities are inoffensive so long as they keep to their own boundaries, but when carried outside, they either hurt those who possess them, or the others who are confronted by them, or perhaps ultimately both. For directly they come out of the environment of their origin they have to be judged by some universal standard of behaviour, by the moral standard which has the universal character of truth.

A man, with an abnormal appetite for acquisition may be appreciated by his wife and other dear ones, but when this appetite of his is brought out in dealings with his neighbours, then the standard of conduct which is exclusively that of his own family circle will no longer serve. The religion, which makes it obligatory for a *thug* to strangle his fellow-creatures must, for its true judgment, come under moral principles which do not peculiarly belong to his own community.

What I want to make clear is the fact that when, as in the present age, the human races have come out of their traditional reservation-fence into mutual contact, the reliance on a universal ethical standard is the only means which can save humanity from disruption into barbarism or death.

The late war which involved a vast number of peoples in its carnage and whose economic and moral consequence

as even now troubling the atmosphere of a great part of the world, is merely an indication that in the hurry of the scientific progress of the West, which has made the human world physically almost one country, the cultivation of ethical ideals needful for this condition has been over looked.

It has come as a great surprise on the races of man,—this sudden change from a life of comparative seclusion to that of mutual proximity, and will test to the full their moral adaptability. The peculiar qualities which gave special advantage in some of them in former days may, in order to save those very people, have to give place to others of an opposite kind.

It is difficult for us to realise this, because the sun-set clouds of the past, under their golden flourishes and blood-red magnificence, conceal approaching doom, and people are still talking in a language which hardly takes account of the impending night.

When we in Asia talk about re-adjustment in response to the world situation to-day, we forget that it should be directed to a future of new ideals and not to the mere shifting about of the methods of a past which is already declared nearly bankrupt. Therefore our dreams still bristle with the image of raised swords, darken with the vision of poison gas, glisten with gold streaks that are but the harbingers of death-dealing thunder clouds.

Of course I know, from the point of view of prudence and practical politics, that a sudden and a complete change may not be possible, or may even be considered dangerous, and so the weapons of the past have yet to be used till they slip off our hands by the very absurdity of their anachronism. And is not their weight already proving too heavy, turning the living skin of man into an impervious sheath, his whole constitution into an iron safe? Is it not for the people the rigor of death itself,—this

progressive stiffening of their muscles and hardening of their hearts?

In man, whose existence is not merely biological, the process of death first begins in his spiritual system and then it creeps into the other departments of his life. This has been the case with all the great civilisations that flourished for a period, and died when their spirit decayed. The continual dwindling in the proportion of food for our moral and spiritual nature has not troubled the political leaders of the present age, not even the scientific philosophers who are busy analysing the component parts of *what* is, and think it old fashioned to bring into view a synthetic vision of *what should be*. The vastness of the race problem with which we are faced to-day will either compel us to train ourselves to moral fitness, in the place of merely external efficiency, or the complications arising out of it will fetter all our movements and drag us to our death.

When our necessity becomes urgently insistent, when the resources that have sustained us so long are exhausted, then our spirit puts forth all its force to discover some other source of sustenance, deeper and more permanent. This leads us from the exterior to the interior of our storehouse. When muscle does not fully serve us, we come to awaken intellect to ask for its help and are then surprised to find that it is a greater source of strength for us than our physical power. When, in their turn, our intellectual gifts grow perverse and only help to render our suicide gorgeous and exhaustive, our soul must seek an alliance with some power which is still deeper, yet further removed from the rude stupidity of muscle.

In the present age the human races have come close together. Their differences in language, tradition and degree of strength are so apparent, as to be a commonplace. Our first meeting has only recognised these

differences, and in the place of geographical barriers it has thereupon set up the barriers of mutual misunderstanding.

Even the religious ministers, sent by the West to the East, whose profession it is to preach brotherly love, have, in their sectarian pride and prudence, emphasised and exaggerated these differences more than any other body of men. They have produced the psychology which makes it comfortably easy for the military and the mercantile powers of their community to carry on their mission of depredation in alien countries helplessly open to their inroads.

This consciousness of difference has poisoned our literature, our history and philosophy and the education of our children,—it has invaded the frontier line of science where it touches sociology. The cultivation of intense race egotism is the one thing that has found its fullest scope at this meeting of men. In no period of human history has there been such an epidemic of moral perversity, such a universal charging up of jealousy, greed, hatred, and central suspicion. Every people, weak or strong, is constantly indulging in a violent dream of rendering itself thoroughly hurtful to others. In this galloping competition of hurtfulness, on the slope of a bottomless pit, no nation dares to stop or slow down. A scarlet fever with a raging temperature has attacked the entire body of mankind, and political passion has taken the place of creative personality in all departments of life.

It is well known that when greed has for its object material gain then it can have no end. It is like the chasing of the horizon by a lunatic. To go on in a competition of multiplying millions is a steeple chase of insensate futility, that has obstacles, but no goal. It has for its parallel the fight with material weapons, weapons which must

perpetually be multiplied, opening up new vistas of destruction, and evolving new forms of insanity in the forging of frightfulness. Thus it seems to have commenced the last fatal adventure of drunken passion riding on an intellect of prodigious power.

When the condition of the world is so desperate, it will not in the least help if we in the East also join in this stampede towards a general annihilation. We must discover our salvation in some other power that has its basis upon sanity, and this power is moral. On its positive side it will work in the direction of unity, cultivating the spirit of sympathy and co-operation. On its negative side it will actively resist the aggression of evil by the moral weapon of complete ostracism, just as we exercise it in its physical form in the case of a fatal disease which is contagious. It will translate fight from its present depth of brutality to the moral altitude which belongs to the human. Through this, society will get rid of fighting as a definite profession.

The division between those who waste their life in cultivating the art of killing and those who labour to sustain them must be removed, and the full flow of humanity through our social organism must not be obstructed. That is to say, antagonism and reconciliation, acceptance and rejection, which taken together are the constant and natural features of life, must not be separated into technical departments but, through moral tradition and training be allowed to function over the whole of society. The development of intellectual and moral sympathy for one's fellow-beings, the spirit of service and sacrifice, and the dauntless attitude of refusal towards evil of all kinds in the face of danger and death, must everywhere form the principal part of education.

Material force has its power in the physical blows it can inflict and therefore emulation goes on endlessly

augmenting the means of dealing such blows It can only come to a natural stop when man asserts the dignity of his spirit and says "I am not afraid" In our weakness we maintain a material power which dominates us, the power which is spiritual dwells in our strength, in our fearless ness, fortitude and spirit of sacrifice.

To-day, more than ever before in our history, the aid of this spiritual power is needed and therefore I believe its resources will surely be discovered in the hidden depth of our being. Pioneers will come to take up this adventure and suffer, and through suffering open out a path to that higher elevation of life in which lies our safety.

Let me, in reference to this, give an instance from the history of Ancient India

There was a noble period in the early days of India when, to a band of dreamers, agriculture appeared as a great idea and not merely a useful fact The heroic personality of Ramachandra, who espoused its cause was sung in popular ballads, which in a later age forgot their original message and were crystallised into an epic merely extolling some domestic virtues of its hero. However, it is quite evident, from the legendary relics still embedded in the story, that a new age ushered in by the spread of agriculture came as a divine voice to those who could hear It lifted up the primeval screen of the wilderness, brought the distant near, and broke down all barricades. Men, who had formed separate and antagonistic groups in their sheltered seclusions, were called upon to form a united people.

In the Vedic verses we find constant mention of conflicts between the original inhabitants of this land and the colonists. There we find the expression of a spirit that was of mutual distrust and a struggle in which was sought either wholesale slavery or extermination for the opponents, in the spirit of animals who live in the narrow

segregation imposed upon them by their limited imagination and imperfect sympathy. This spirit would have continued in all its ferocious vigour of savagery had man failed to find the opportunity for the discovery that man's highest truth was in the union of co-operation and love.

The progress of agriculture was the first external step which led to such a discovery. It not only made a settled life possible for a large number of men living in close proximity, but it claimed for its very purpose a life of peaceful co-operation. The mere fact of such a sudden change from a nomadic to an agricultural condition would not have benefited man, if he had not developed therewith, for the guidance of his conduct, some inner principle of truth. We can realise, from our reading of the Ramayana, the birth of idealism among a section of the Indian colonists of those days, before whose mind's eye was opened a vision of emancipation rich with the responsibility of a higher life. The epic represents in its ideal the change of the people's aspiration from the path of conquest to that of reconciliation.

In the present time, as I have said, the human world has been overtaken by another vast change similar to that which had occurred in the epic age of India. So long, men had been cultivating, almost with a religious fervour, that mentality which is the product of racial isolation, poets sang, in a loud pitch of bragging, of the exploits of their popular fighters, money makers neither felt pity nor shame in the unscrupulous dexterity of their pocket-picking, and diplomats scattered lies in order to reap concessions from the devastated future of their victims. Suddenly the walls that separated the different races are seen to have given way, and we find ourselves standing face to face.

This is a great fact of epic significance. Man, suckled at the wolf's breast sheltered in the brute's den, brought up in

the prowling habit of depredation, suddenly discovers that he is man, and that his true power lies in yielding up his brute power for the freedom of spirit.

There are a few great countries,—China is among them and also Japan,—that have found their civilisation from the soil of nature, the mother who taught them the lesson of life, the music of which, flowing in the blood of their children, revealed itself in a vast symphony of human relationship.

They have loved Mother Nature's rivers and hills, they have fed their eyes upon the blue of her sky and the tender green of her corn shoots, they have enjoyed the dance of the invisible rhythm in all the forms and colours with which she surrounds them, they have known that the subtle intricacies of human existence find their perfect unity in the harmony of interdependence, never in the vigorous exercise of elbows in the midst of a mutually pushing multitude, clamouring for a solitary peak of self determination, they have never indulged in the arrogant assertion of independence which only belongs to the barren rocks and to the desert wastes grey with the pallor of death

This spirit of interdependence is the spirit of meekness in life which gives it the unseen and inexhaustible strength to inherit the earth that we find in the green grass whose banners of conquest are humble and yet ever victorious. Therefore I would bring to you the cry of this New Age which is waiting to close the blood-stained pages of its past and to hear the epic that will voice its hope in a great song

I am afraid, however, you will find it difficult to put faith in a poet's dream I can guess how disappointed you must feel at not hearing anything from me of a practical nature. There is a proverb in Sanskrit that you must not expect fruits from a sugarcane As a poet I can

only have vision. It may not be as useful as, say, your fishing rod, but it may produce the same effect as the spring breeze. Very often it is of more importance merely to attract your eyes towards the path rather than encumber your back with a ladder. That ladder appears so substantially practical that, in the joy of its possession, one often forgets to enquire if there is any height to be scaled.

RABINDRANATH TAGORE

THE UNITY OF LIFE

The Hindu University will always be a monument of the faith which inspired Pandit Madan Mohan Malaviya in his life-long work for founding the great centre of learning at Benares for the advancement of world's knowledge. To be organic and vital, the University must stand primarily for self-expression and for winning for India her true place in the Intellectual Federation of Nations.

INDIA'S GIFT

Nothing can be more vulgar or more untrue than the ignorant assertion that the world owes its progress of knowledge to any particular race. The whole world is inter-dependent, and a constant stream of thought has, throughout the ages, enriched the common heritage of mankind. It is the realisation of this mutual dependence that has kept the mighty human fabric bound together and ensured the continuity and permanence of civilisation. Although science is neither of the East nor of the West, but international in its universality, yet India, by her habit of mind and inherited gifts handed down from generation to generation, is specially fitted to make great contributions in furtherance of knowledge. The burning Indian imagination, which can extort new order out of a mass of apparently contradictory facts, can also be held in check by the habit of concentration, it is this restraint which confers the power to hold the mind in pursuit of truth in infinite patience. The true laboratory is the mind, where, behind all illusions, we catch glimpses of truth. In

order to discover the life mechanism in the interior of the tree, one has for the time being, to become the tree and feel the throbbings of its beating life. This inner vision has, however, to be frequently tested by results of experimentation; for, otherwise it may lead to the wildest speculation subversive of all intellectual sanity. It is only by the contact of the hand with real things that the brain receives its stimulating message, and the answering impulse then gives the hand its cunning.

For great inventions also, a clear inner vision is essential. When microscopic vision fails, we have still to follow the invisible; for the little that we can see is as nothing compared with the vastness we cannot. Thus for exploring the realm of the invisible, the Magnetic Crescograph had to be invented, producing the stupendous magnification of a hundred million times.

Such supersensitive apparatus is, however, of no avail unless one can make use of it after having gained complete control of the adjusting hand. For any imperceptible tremor of the finger becomes enormously magnified by the highly sensitive apparatus. It is however, quite possible to obtain the necessary control over the body by the concentrated power of the will.

The conditions for any great discovery are, then, a great imaginative faculty and power of introspection, the faculties of invention and of great experimental dexterity. It is now fully acknowledged that the Indian worker has a unique advantage in his introspective power acquired under special training, in experimental dexterity also he is very efficient. The supersensitive instruments he has been able to construct in my Institute testify to his power of construction and invention. It is by personal training and through years of discipline that these faculties can be fully developed.

THE UNITY OF LIFE

The excessive specialisation in the West has led to the danger of our losing sight of the fundamental truth that there are not sciences but a single science that includes all. Perhaps through her habit of mind, India is better fitted to realise a wider synthesis. An important contribution in the realm of science is the establishment of the generalisation, not merely speculative but based on actual demonstration, of an underlying unity amidst bewildering diversity. Previous observers have been misled by the apparent differences between the reactions of life of plants, seemingly inert and passive, and those of animals with their reflex movements and pulsating organs. Two streams of life have thus been imagined to flow side by side with little in common between them. Researches in my Institute have, however, shown that the mechanism of the life of plant is essentially similar to that of the animal. From this it would follow that the complex mechanism of the animal machine, which has so long baffled us, would naturally find its solution in the corresponding problems of the simpler vegetable life.

FORM AND FUNCTION

Investigators have been misled by concentrating their attention on the form rather than on the function of the organ. Nevertheless, on account of similarity of function, plants have been acknowledged to have digestive organs as in *Drosera*, *Dionæa*, and *Nepenthes* though great difference exists in the form of these organs in plant and animal. The plant world affords a unique opportunity for studying the changes by which a simple primitive organ becomes gradually transformed into one of greater complexity.

ANIMAL AND PLANT MECHANISM

Investigations have shown that the most important physiological mechanisms in the animal are also found in the plant. The common characteristics are (1) *Contractility* on account of which response by movement occurs under external stimulation; (2) *Conductivity* or power of transmitting excitation to a distance; and (3) *Rhythmicity* or so called spontaneous movements. Finally it has been found that drugs, generally speaking, affect the animal and plant alike. A large number of Indian plants are being discovered, whose medicinal properties have never been suspected. Further progress is expected (1) by the survey of Indian plants for discovery of their specific medicinal properties, (2) by the establishment of a physic garden, (3) by isolation of the active principles from plant extract, and (4) by careful and prolonged investigation for standardisation of the dose on human subjects.

PARABLE OF THE TREE

The tree is not a mere collection of unrelated parts but is an organised unity. It persists because it is rooted deeply in the soil, which is the place of its birth. Its own soil provides it with proper nourishment, and endows it with strength in struggling against the waves of change and disaster that have passed over it. The shocks from outside have never been able to overpower it, but have served only to awaken its nascent powers. The decaying and the effete have been cast off as worn leaves, and changing times have called forth its power of readjustment.

Whence did the tree derive its strength by which it emerges victorious from all peril? It is from the strength derived from the place of its birth, from its perception and quick adjustment to change and from its inherited memory of the past. The efflorescence of life is the supreme

gift of the place and its associations, and patriotism is the response to the call of the country. Who could be so base as to be deaf to that supreme call?

Is there any strength for the constant renewal of our national life? Is the tradition of the past dead and forgotten, or is there a latent power of national memory which is to be awakened once more in a new and vivified impulse? The high character and achievements of our people will to-day prove to be the greatest constructive force. It will not be through transient emotion, but through persistent efforts, that they will succeed in building the Greater India yet to be. They will realise that for national advance it is ignorance that divides, and knowledge that unites the multiple forces contributed by the different peoples who have made India their home and their motherland.

It is not by passivity but by active struggle that the world can be served in nobler ways. The weakling who refused the conflict, having acquired nothing, has nothing to give or renounce. He alone who has striven and won can enrich the world by giving away the fruits of his victorious experience. It was action and not passivity, that was glorified in the heroic India of the past. There can be no happiness for any of us, unless it has been won for all. When a great call is echoing through the land, who can lead a life of ignoble ease?

OUTLOOK FOR THE FUTURE

Let us not talk of the glories of the past until we have secured for India her true place. What is it that stands in her way? Are we afraid that the march of knowledge is a danger to true faith? Not so; for to us knowledge and religion are one. Do we now lack devotion to a life consecrated to knowledge? Not so, for we have still the *sannyasin* spirit which utterly controls the

body and can meditate or inquire endlessly while life remains, never for a moment losing sight of the object, never for a moment let it be obscured by any terrestrial temptation

These are the hopes that animate us. For there is something in the Indian culture which is possessed of extraordinary latent strength, by which it has resisted the ravages of time and the destructive changes which have swept over the earth. And indeed a capacity to endure through infinite transformations must be innate in that mighty civilisation which has seen the intellectual culture of the Nile Valley, of Assyria, and of Babylon, wax and wane and disappear, and which to day gazes on the future with the same invincible faith with which it met the past.

J. C. BOSE.

THE ANGLO-SAXON SETTLEMENT IN BRITAIN

The story of the Germanic invasion of Britain in the 5th century A.D. has been told by many authors and the earliest sources for our knowledge of the settlement of the Teutonic invaders in Britain are: (1) The Anglo-Saxon Chronicle which survives in six MSS. containing collections of Annals which are partly identical and partly distinct; (2) Bede's Ecclesiastical History of the English People written about 730; (3) the Historia Britonum, a work of probably the first part of the 9th century and ascribed among others to Nennius and Marcus the Anchorite; and (4) the book supposed to have been written by Gildas in the first half of the 6th century. The best known of these accounts is Bede's who describes the arrival of the invaders in Britain at the invitation of King Vortigern sorely beset by his northern enemies, the Irish and the Picts. "The nation of the Angles or Saxons arrived in Britain in three long ships and had a place assigned to them in the eastern part of the island." Soon after a bigger fleet came over with more men from "the three most powerful nations of Germany—Saxons, Angles and Jutes. From the Jutes are descended the people of Kent and of the Isle of Wight, and those also in the province of the West-Saxons who are to this day called Jutes seated opposite to the Isle of Wight. From the country which is now called Saxony came the East-Saxons, the South-Saxons and the West-Saxons. From the Angles are descended the East-Angles, the Midland Angles, Mercians, all the race of the Northumbrians and the other nations of the English." The two first commanders were Hengist and Horsa, the sons of Victgilsus, whose father was Vecta,

son of Woden. Within a short time they entered into a league with the Picts whom they had already quelled by force of arms and turned their weapons against the Britons. In a later chapter Bede adds that Martianus obtained the throne in 449 with Valentinianus and held it for seven years and it was in their time that the Angli summoned by the Britons came to Britain. Bede also mentions in his Chronicle Maiora that when Aetius did not respond to the appeals of Britons in 446 A.D. they called in the Angli to help them against the Picts and Scots. This second passage of Bede is derived from the work of Gildas, the British historian who was probably born in 517 A.D.* Gildas however speaks of the invaders as Saxones, not Angli.

The account of the invasion of Kent in the Anglo Saxon chronicle follows substantially the same lines but supplies a few additional details. In 449 Hengist and Horsa, invited by Wyrtgeorn, king of the Britons, came to Britain at a place called Ypwinesfleot. They fought against Wyrtgeorn in 455 at Aegelesthrep and Horsa was slain, and after that Hengist obtained the throne with Aesc, his son. Hengist and Aesc fought against the Britons in 457 at Creccanford and slew 4000 men, and the Britons forsook the land of Kent and in great consternation fled to London. In 465 Hengist and Aesc fought with the Welsh near Wippedsfleot and slew twelve Welsh leaders, while they lost one knight whose name was Wipped. In 493 they again defeated the Welsh and captured immense booty, while in 488 Aesc succeeded to the kingdom and ruled for twenty four years.

A fuller account of the invasion is given in the Historia Brittonum, an account, thus, which differs from the preceding ones in more than one important detail. "When

* He mentions he was born in the year of the siege of Mons Badonicus which is entered in the Annales Cambriae under LXXII, i.e., probably 516 A.D.

the dominion of the Romans in Britain was ended, the Britons were in fear for forty years. Guorthigirnus reigned in Britain, and while he reigned he was oppressed by fear of the Picts and Scots, by Roman attack and by dread of Ambrosius. Meanwhile there came three ships driven away from Germany in exile. In them were Hors and Hengist who were brothers son of Guitgils, son of Guitta, son of Guecha son of Vnoden, son of Freslaf, son of Fredulf, son of Finn, son of Folcwald, son of Geta who was, as they say, son of God .... Guorthigirnus received them kindly and gave them an island which in their tongue is called Thanet but, in the British language, Ruoihin."* The king promised them food and clothing and they, in return, promised to fight against his enemies. When however their numbers increased, the Britons wanted them to go away. This they did not naturally want to do and hostilities were about to begin. Here there seems to be a gap in the story, for the next section tells us that Hengist on "perceiving the helplessness of the Britons persuaded their king to allow him to send for reinforcements." This contingent arrived with Hengist's daughter whom the British king desired to marry, consenting to give Kent to Hengist. Further reinforcements come, the Orkneys are devastated and then Hengist fights against Guorthemir, the king's son. Four battles take place, one near Thanet, the second at Derguentid, the third at Episford (the British name being Rit hergabail) where Hors and Categern are killed, and the fourth near the Lapis Tituli where the invaders are signally defeated. But Guorthemir dies shortly afterwards, the invaders return and have a conference with the British, where they treacherously slay the British nobles, allowing the king to ransom himself by granting Essex and Sussex to them. Later on, when Hengist dies, his son, Octha, goes to Kent.

* Chadwick's translation.

These accounts of the triumph of Hengist have to be supplemented by the story of the West-Saxon invasion as told in the Anglo-Saxon Chronicle. In 495 Cerdic and his son, Cynric, came with five ships to a place called Cerdicesora and fought with the Welsh the same day. In 501 Port and his two sons, Bieda and Maegla came with two ships to a place called Portesmutha and slew a young Briton of very high rank (swithe aethelne monnan). In 508 Cerdic and Cynric slew a British king called Natanleod and the district was called Natanleag as far as Cerdicesford. The West-Saxons, Stuf and Wihtgar, arrived in 514 at Cerdicesora and put the Britons to flight. Cerdic and Cynric began to reign in 519 when they fought with the Britons at Cerdicesford. In 527 Cerdic and Cynric fought against the Britons at Cerdicesleag and in 530 occupied the Isle of Wight, slaying a few men at Wihtgaresburg. Cerdic died in 534 and his son reigned for 26 years, the Isle of Wight being given to their nephews (nefan), Stuf and Wihtgar. In 544 Wihtgar died and was buried at Wihtgaresburg, but Cynric continued fighting against the Britons till 560 when Ceawlin succeeded him.

The Chronicle is practically the only authority for this invasion and Prof. Chadwick points out that the credibility of the account is open to various objections: (1) Most of the place-names, e.g., Cerdicesora, Cerdicesford, Natanleag, Portesmutha, etc., etc., contain the names of the chief fighters. Of course the places may have been named after these warriors, but when the correspondence is uniform, one has a suspicion that the characters were perhaps made up on the basis of the place names. (2) The chronology seems to be artificially built up, but that by itself is no serious objection against the credibility of the events which may have taken place though the dates given are wrong ones. (3) That the dates are wrong is further evident

from contradictions in the Chronicle itself, for the Preface to the Parker text makes Cerdic reign from 500 (not 519) and die in 516 (not in 534). Ceawlin again is said to reign for 17 years according to the Preface while the Annals give him more than thirty years. A more serious discrepancy is evident on an examination of the genealogy of Aethelwulf in the Preface, where Cynric is made the grandson of Cerdic and not his son, as the Annals would have it. (4) Cerdic again is a Welsh and not an English name* and it is curious that the leader of the invaders should be so named. (5) The chronicle account is completely at variance with Gildas statement that there was no fighting "between the Britons and the Saxons for forty four years after the siege of Mons Badonicus," i.e., from perhaps 517 to 561. (6) The Isle of Wight is said to be conquered by Cerdic and given to Stuf and Wihtgar, who are definitely West-Saxons. This statement is contradicted by Bede who describes the island as colonised by Jutes.

Individually each one of these objections may not have sufficient strength but their cumulative effect is certainly strong. Moreover when we turn to the accounts of the conquest of Kent we find some difficulties in the way, but these are nothing so serious. Artificial chronology is apparent and there is a curious resemblance between the stories of the two invasions. Similarly correspondence between the name of a warrior and a place is here confined to one instance,—Wippedsfleot,—but the story of the Historia Britonum does not agree with the Bede and Chronicle account in several details, e.g., in the motives ascribed for the coming of the Saxons or in the dates assigned to the invasion. Hengest and Horsa are not familiar Teutonic names, but Hengest is known in the Finn-story and Horsa may be a shortened form of a name

*It is most probably derived from the old British name *Cerdhesus* and shows the Welsh change from t to d dating perhaps from the early 7th century

with Hros,—a compound like Hroaldgen as we find in Norse. The discrepancy of motive too is explainable, for it is possible that Hengest arrived as an exile, was then invited to help the British against the Picts, sent for reinforcements and finally turned against the British. The difficulty about dates is not serious at all, for though there may be mistakes in chronology the events described need not be imaginary.

The accurate date is naturally very difficult to fix and is not important for our purposes. The three alternative dates are (1) 375 as suggested in one section of the Historia Britonum and a genealogy This date is easily rejected as for a good many years after 375 Britain was ruled by the Romans (2) 428 as stated at various places in the Historia and (3) 450 or thereabouts as mentioned by Bede and the Chronicle A fourth alternative is suggested by a Gaulish Chronicle which places the invasion in 441-2, while Gildas implies that it was after 446 The balance of probability seems to favour the last date as at least fairly approximate

Having examined the story of the conquest of Britain we next take up the more important point as to whether the invaders belonged to three different nations, the Saxons, Angles and Jutes There is Bede's explicit statement about this but it is not supported by any contemporary writer and the only other statement on the matter by a contemporary or predecessor of Bede is that of Procopius in his Gothic War, IV 20, a work much older than Bede's "The island of Britta contains three very populous nations, each of which has a king over it The names borne by these nations are Angilon and Phrissones and Brittones, the last having the same name as the island."* It will be noticed that Procopius does not mention the

* Chadwick's translation,

Saxons or Jutes but includes the Frisians among the inhabitants of Britain. As a matter of fact, except in passages directly based on Bede's account, the people of Kent are never described as Jutes. They are usually called *Cantuare*, sometimes *Saxones* or *Angli*. The Hist. Brit. generally calls them *Saxons*, as Bede himself does in Hist. Ec. I 14, while A. S. Chron. Ann 473, calls them *Englas*. In Bede, I 32, Pope Gregory addresses Aethelberht, King of Kent, as king of the Angles, while in III 8, the same appellation is given to Ercenberht, King of Kent

There is a similar confusion as regards the so called Angles Thus the Hist Brit. refers to the Northumbrians as Saxons and the Annales Cambriae describes Oswio of Northumbria as king of the Saxons In Bede III. 29, Pope Vitalianus addresses the same King as king of the Saxons, while in the Annals of Tighernac Edwin of Northumbria is described as ruler of the Saxons The use of Angle for Saxon is as frequent, if not more so. In A. S. Chron. Ann. 897 some *English* men are said to be slain where obviously people of Wessex or Sussex are referred to Similarly King Alfred in his famous introduction to the Cura Pastoralis deplores the loss of learning in Angelcynn, meaning particularly Wessex. In Chron Ann 836 Egberht, King of Wessex, is said to have been expelled from Angelcynnes land before his accession. Numerous such examples may be cited as also the continual use of the phrase "Angle and Saxon" not for contrasting the two, but for referring to the people of Wessex or Essex Again, when Bede enumerates the languages spoken in his land he says "This island at present contains five nations, the English, Britons, Scots, Picts and Latins, each in its own peculiar dialect cultivating the sublime study of Divine truth" though later he refers to the Saxon language as spoken in Wessex and Essex In the face

of this confusion it would be difficult to justify Bede's strict classification and if we examine the archæological and sociological evidence we find it equally difficult to distinguish between the Angles, Saxons and Jutes

The archæological evidence is nothing like conclusive. It has been sometimes maintained that before the introduction of Christianity the method of disposal of the dead with the Saxons was by inhumation and with the Angles by cremation. The Teutonic nations on the Continent practised both though cremation was gradually passing out of use. The practice of the Angles was certainly not consistent and in England at least they practised inhumation as well as cremation Whether the Saxons practised cremation is more doubtful There are instances of cremation from Kent and the Isle of Wight, but these may be ascribed to the Jutes, while the cremation-cemeteries of Croydon and Beddington are too near the Kentish border. There are, however, examples from districts further west, e g, from Walton on Thames and Shepperton, and these must be regarded as Saxon Cremation-cemeteries most probably dating from Saxon times have also been found in Sussex and in the upper part of the Thames valley The method of disposal of the dead does not therefore prove anything The only fact that comes out seems to be that cremation was more common in the north and inhumation in the south and the difference may have been due to Continental practice the influence of which was felt more in the south than in the north.

Another archæological evidence on which some reliance has been placed is of brooches found in cemeteries, it being held that the saucer-shaped brooch was peculiar to the Saxons and the cruciform one to the Angles. It is true that the latter has been found mostly in northern cemeteries, but quite a number have been discovered in

Sussex as well. The saucer-shaped brooch again has not been discovered except in Buckingham, Oxfordshire and Gloucestershire. A few have been discovered in Berkshire and Sussex as also in Bedford, Northampton and Cambridge but practically none in Wiltshire or Hampshire or Essex. So the argument about its being distinctively Saxon falls to the ground.

When we come to examine the political systems we do not find any difference between the so-called Anglo-Saxon and Jute districts. The institution of monarchy seems to have prevailed universally and the king's powers appear to have been very much the same everywhere. When however, we start investigating the social structure we come across one real difference between Wessex and Kent. There were three hereditary classes in Wessex, the *twelfhynde*, the *sixhynde* and *twihynde*, so named from their respective *wehrgelds* 1200, 600 and 200 shillings respectively. The two first-named comprised the *gesiithcund* or nobility and the *twihynde* were *ceorls*. These three classes made up the "Saxon" population and in addition there were the Welsh freemen whose *wehrgeld* ranged between 60 and 120 shillings, though royal service or possession of land increased the amount of *wehrgeld*. In Kent too we find three classes, the nobleman called *sorlcund man*, the freeman or *ceorl* and the *lact*, who were most probably freed men, the *lits* of the Continent. A difference between this organisation and the Wessex one is evident in this that in the latter there are two classes of noblemen, whereas in Kent there was only one. Moreover in Kent there was a class below the freeman, while in Wessex the only class below the *ceorl* was of the Welsh people. But the difference in the matter of *wehrgelds* is more noteworthy, those of the three classes in Kent being 300 shillings for the nobleman, 100 for the *ceorl* and 40 to 80 shillings for the *lact*. The shilling was, however, not the same in Kent and in Wessex and

to get the proper *wehrgeld* for each we have to consider it in terms of oxen. In the seventh century, the value of an ox was six shillings in Wessex, each shilling containing four pence. The wehrgeld of the three Wessex classes would therefore be 200, 100 and 33 oxen respectively. The Kentish shilling contained 20 *scattas* which were not probably different from the Wessex pence. Thus the wehrgeld of the nobleman would amount to 6000 pence or in terms of live-stock to 250 oxen, that of the *ceorl* to 2000 pence or 83 oxen and of the freed man to about 50 oxen. From a comparison of these figures a remarkable difference is noticeable in the status of the *ceorl*. The landed nobleman* in Wessex has practically the same wehrgeld as in Kent, but the wehrgeld of the freeman in Wessex is less than half of that in Kent.

This difference is not confined only to wehrgelds. We may take the "honour-prices," the sums paid as compensation for insult to members of the different classes. In Wessex these amounted to 36, 12 and 6 shillings respectively for the three classes or in terms of live stock again to 6, 3 and 1 ox respectively. In Kent the payments for the nobleman and *ceorl* were 12 and 6 oxen, the latter being six times the corresponding payment in Wessex. If we examine other compensations we find a similar difference all through.

Next we may turn to the social systems of Mercia and Northumbria but here the evidence at our disposal is confused and fragmentary. In Mercia the wehrgelds of the nobleman (who was here also called *twelfhyndman*) and the freemen were in the seventh century the same as in Wessex, while the slight indications we have about compensations seem to point to the same conclusion. In Northumbria a different monetary system was in use, but on equating the wehrgelds with live-stock we find that for the *ceorl* to be exactly the same here as in Mercia and Wessex.

* The *sixhynde* did not possess any land.

It seems then that for some reason or other the status of the Kentish freeman was much higher than that of the freeman in Northumbria, Mercia or Wessex, and if we examine the social systems of the Teutonic tribes of the continent, the Franks, Alamanni, Bavarians and Frisians, we find that they approximated to the Kentish standard rather than to the Wessex Mercian one, not only in the status of the freeman but also in having a class of freed men lower than the freeman. What is important for our purpose is however this, that here seems to be some confirmation for Bede's statement about the Kentish people being "of a different nationality from those of the surrounding kingdoms," but we cannot discover any such difference between the people of Wessex and Sussex on the one hand and of Mercia and Northumbria on the other *.

The evidence of the traditional genealogies may also be mentioned here. Such "genealogies have been preserved of the royal families of Kent, Wessex, Essex, East Anglia, Mercia, Deira and Bernicia." The Essex and Wessex ones being genealogies of Saxon dynasties should supply us with some evidence about a different origin from the Anglian dynasties of Mercia etc. The Essex genealogy is indeed different from the others in this, that it traces its dynasty back to a person named Seaxnet, while the others all go back to the God Woden. In one or two late versions Seaxnet is made a son of Woden but in the earliest lists he is the first name and he is evidently the same as Saxnot, "one of the three gods mentioned in a short continental document generally known as the 'Renunciation Formula' and probably of old Saxon origin." This is important as it would seem to supply a connection between

* A possible explanation is that in the so-called Saxon and Anglo territories the Welsh people had mixed more freely with the freemen and inter-marriages, etc., had led to a lowering of the status of the freeman.

the Saxons of the Continent and of Britain. If however, this point was to be of material help to us in settling a distinction between the Saxon and Anglian lines we should have expected the Wessex list also to go back to Seaxnea. But this latter traces its royal family from Woden, as all the other dynasties (except the East-Saxon one) do and not only to Woden but to the same son of Woden, Baeldaeg, as the Bernician genealogy does. East Anglia and Mercia, though apparently with Anglian dynasties as the Bernician one, trace their royal families not to Baeldaeg but to a different son of Woden. The third name too in the genealogies of Wessex and Bernicia are common, at least in some versions which have the following order: Woden, Baeldaeg, Brand. So one cannot resist the conclusion that the two families claimed to be of the same stock and the evidence of the Essex genealogy which might have suggested a different origin from the Anglian dynasties is to a great extent counteracted.

We have then examined early historical documents and traditional genealogies, archaeological materials and social conditions to find out if Bede's distinction between Angles, Saxons and Jutes may be justified. All this evidence we have found to be inconclusive and so far the only real distinction we have discovered is between the "Jutes" of Kent on the one hand and the Angle-Saxon tribes on the other,—a vital difference in social structure which may lead us to suppose the Kentish tribe to be essentially distinct. We may now turn to the linguistic evidence and see how far that would help us to distinguish between Angles, Saxons and Jutes. When trying to investigate these dialectical differences,—or rather to discover if there are any such differences, we are at the beginning faced with the critical difficulty of an extreme paucity of materials on which to work. Our investigations to be worth anything must be based on sixth and seventh century

materials, for differences perceivable in later literature may be due to causes other than a difference of origin. But the difficulty is that comparatively little has survived from this early period. From Wessex, for example, we have plenty of literary materials in the ninth and succeeding centuries, but here practically nothing except one charter. From Kent we have a few Latin charters which contain English words and names,—charters dating back to the seventh century and as such, of some value for linguistic examination. From Mercia we have the Epinal and Corpus Glossaries* and a few Latin charters of the eighth century with English proper names. The Northumbrian Fragments included in Sweet's Oldest English Texts do not date from earlier than the ninth century, but we know a number of earlier proper names from the genealogies and the Moore MSS. of Bede's Hist. Ec., which are "sufficiently numerous to enable us to form an idea of the characteristics of the dialect during the eighth century."

In all philological text-books there is usually a tabular classification of the distinctive characteristics of the three chief dialects of Old English, West Saxon, Kentish and Northumbrian †

WEST SAXON

1. "*a* is diphthongised before *l* followed by a consonant," (though this is not universal) e.g., *ald* which is *eld* in Northumbrian.

2. "Vowels are diphthongised after palatal consonants," e.g., *ceaster* from Latin *castra*.

3. "The diphthongs *ea* (*eal* and *ea* (*ies*) when palatalised have become *i* ē" (earlier *ie*, *ie*), e.g., *sceht* which is *seshi* in Northumbrian.

* The tables are Prof. Chadwick's.

† The evidence of the Glossaries is not to be relied on very much, for there is no decisive external evidence in regard either to the period or locality in which they were written.

4. "The diphthongs *iu*, *īu*, except before *u*, have become *i*, *ī*" (earlier *iu*, *īu*); e.g., *hiwe* (=new) which is Northumbrian *niwe*.

5. "The diphthongs *eu* *iu* (before *a*) and *eo*, *īo* are confused"; e.g., *seolfor* and *seolfor*, *fiola* and *fiola* are found.

6. "The palatalised labial vowels *oe*, *ōe*, *y*, *ȳ* (from *o*, *ō*, *u*, *ū*) have been delabialised" (*e*, *ē*, *i*, *ī*), e.g., *cwēn* (=queen) which is *cwīna* in Northumbrian.

7. "The diphthongs *ea*, *ēa*, *eo* (*ēo*) are reduced to monophthongs (*ē*, *e*) before *h*" (*ēa* also before and after *c*, *g*) e.g., *cniht* (=boy) is found side by side with *cneoht*.

KENTISH

1. "*a* is diphthongised before *l* followed by a consonant." [But the evidence on this point is not very satisfactory. It does not occur in charters 4—7 in the oldest English Texts and is rare in 33-37, the Kentish origin of which is practically certain. In the charters 38—40, 43, 44, the *-ea* greatly outnumbers the *-a*. The Kentish Texts of the Middle English period agree with the later charters and show that "the breaking (or at least palatalisation) of *a* before *l*+consonant took place before the palatalisation of initial guttorals" and consequently that a Kentish form *ceald* of the ninth century can not be a direct development of a Kentish form *cald* of the eighth century].

2. "*ea*, *ēa*, whatever their origin have become *e*, *ē*". forms with *a* are frequent in the earliest charters, though forms with *ea* are also found. Thus charter 4 has *-rad* (thrice) to *-ferd* (once), charter 5 has four examples of *a*, but none of *ea*. In the later charters too *ea* is very rare, though 41 has got a few examples.

3. "The diphthongs *ea*, *ea* when palatalised become *e*, *ē*" (earlier *ea*, *ae*), e.g., *erfe* (=inheritance), W. Sax. *irfe*. [In the later charters, 38—40, 43, 44, there are about

20 examples of diphthongs, but in the earlier ones practically none.]

4. "The diphthongs *eo*, *io* and *ea*, *ia* are confused and subsequently delabialised" : e.g. *beorht*, *berht*, *bierht*. [This evidence is not present in the early charters, but we find numerous instances in the later ones. Thus we have *beorn* in 36 and *bearn* in 33, 34, 35, 37 and 40, *eal* occurs in 36, 41, 44 and *eal* in 33, 34, 35, 38, 40, 42, 43, *sulf* in 41, 42 and *selfe* in 43.]

5. "The palatalised labial vowels *y*, *ȳ* (from *u* *ū*) have become *e*, *ē*", e.g. eppan (=disclose) from earlier yppan.

6. "Labial vowels in unaccented syllables are delabialised" : e.g. *brōðar* from *brōðor*.

NORTHUMBRIAN

1. "All diphthongs lose their second element before guttural and palatal consonants" (*c*, *g*, *h*), e.g., were for W. Sax. weore.

2. "*āē* (from *ǣ*) has become *ē*, e.g. =rēd (=counsel) for W. Sax. rǣd." [In the MSS. of Bede *e* is the normal form of the i-mutant of *ae*. But there are certain forms with =ae (=oe) before *i* in the following syllable. The confusion of aedil and edil in particular is very interesting. The Bede MSS. has 42 aedil- to 6 edil-, while Liber Vitae has 4 aedil to 68 edil.]

3. "The diphthong *ēo* (*ēa* when palatalised has become *ē*" (earlier *īē*) e.g. Edwine beside Eadberht.

4. "The diphthong *ea* when palatalised becomes *ea*" e.g. *meaht* (=power) as for W. S. *maht*.

5. "The diphthongs *ea*, *ēa* and *eo*, *ēo* are at least in some cases confused," e.g. Ēod and Ēad. [There are numerous examples of *ea* for *eo* in Bede M. But very few in Liber Vitae, e.g., there are 72 *beorn* against 1 *bearn*.]

For Sussex the only early evidence we have is one charter from which we may judge that the dialect occupied a position between Kentish and West Saxon. For Mercia too we have no very dependable early texts, for the Glossaries supply doubtful evidence." There are a number of early texts which do not exhibit the characteristics of any of the dialects treated above and which are probably to be ascribed to the Midlands. They differ very considerably among themselves, but all seem to show forms of language intermediate between Northumbrian and Kentish Indeed they exhibit practically no sound-changes which do not occur in one or other of these dialects The West-Saxon and Kentish diphthongisation of a before l followed by a consonant does not appear, nor do we find any trace of the specifically West-Saxon changes 3, 4, 6, 7. The Kentish changes 5 and 6 are also wanting, while the delabialisation in 4 is generally" confined to unaccented words. There is very little evidence for Northumbrian 5," though 1, 2, 3 and 4 are mostly present

Our next task is to discover how far these distinctive features are present in the earliest documents,—documents of the sixth, seventh and early eighth centuries. While discussing some of the Kentish changes, 4 for example (and we may add 5 and 6), we have pointed out that the change is evident only in the latest documents, i.e., those which date from after the middle of the ninth century. "The early Kentish texts show no dialectical peculiarities which do not occur also either in Midland or West-Saxon texts. In the very earliest even a for æ is quite rare."

In other cases we may not find written texts from a period anterior to the sound changes, but in the earliest examples we find a state of transition and confusion of old and new forms, e.g., with W. S. 5, 6, 7, K. 2, 4, N. 2, 5. It is difficult to trace any of them back beyond the middle of the seventh century while some of them, e.g., W. S. 7 date

perhaps from the ninth. Many of the changes again, e.g., W. S. 3, 4, K. 3 and N. 3, 4 arise from one important sound change by which old English was differentiated from the neighbouring Teutonic languages. Here all vowels were palatalised before *i* in the following syllable, e.g., brȳd (= bride) for O. H. G. brut and O. N. brúðr. If we now attempt to find out the date of this change we do not discover any evidence for supposing that the palatalisation took place early. Beda M. preserves a number of instances which do not show this change. It is true many words borrowed from Latin appear in English with palatalisation and some of these words were perhaps borrowed as early as the fifth century but most of them were not probably current in England before the conversion of Kent at the end of the sixth century.

There is practically no evidence then for supposing these phonetic changes as original distinctive features of the dialects. In the matter of inflexional variations too we find little worth observing in texts earlier than the tenth century, while about vocabulary it is impossible to speak with any certainty on account of the paucity of early evidence. The linguistic evidence then takes us no farther than the historical and sociological evidence, and on the whole there appears to be little justification for the distinction drawn between three types of Germanic settlers.

N. K. SIDHANTA.

SOME ENGLISH POEMS ON INDIAN SUBJECTS

The treatment of Indian subjects in English poetry must always be a matter of special interest to students of the literature, at least in this country. Having already discussed the subject of Anglo-Indian poetry in more than one publication, it strikes me it may be useful to give here an account of a few English poems which have been written on Indian subjects by poets in England based by them, it is true, not on any intimate familiarity with the country, but on such knowledge as could be acquired in the circumstances. In spite of the close relations between the two countries, English literature cannot boast of any poem of Indian interest which has attained to the literary rank of the *Lusiad* of Camoens with its triumphant account of the discovery and conquest of India by Vasco de Gama; but there are several poems, though of minor importance, which must excite the curiosity of the literary student.

There are no independent English poems on Indian subjects up to such a late period as the beginning of the nineteenth century, though references to India are quite common in the earlier poems and an interesting account of them may be given on another occasion. Chaucer's picture of "King Demetrius of Ind" does not come to anything more definite than his possession of great wealth and Oriental splendour; Spenser had the vaguest visions of India as a land of romance; Marlowe's Tamburlaine dreamed of a nearer passage to India by connecting the Mediterranean and the Arabian seas, most of Shakes-

peare's references to India are also due to its reputation as the land of wealth, though the Indies of his plays are as often of the West as they are of the East, Milton has heard of Agra and Delhi and the Great Moghul courtiers and has also seen in imagination ambassadors from India and Ceylon leaving the gates of Rome, "dusky faces in white silken turbans wreathed," and that is all.

Things are not better in the 18th century, though the postman in Cowper's *Task* is asked for news about India, the impeachment of Warren Hastings rouses some interest in English poets and regret is expressed that he has escaped, Campbell in his *Pleasures of Hope* prophesies the coming of Kalki the last Avatar of Vishnu, to redeem India from foreign domination and the *Rolliad* attacks the retired Anglo-Indians who were able to buy seats in parliament with the money earned in India 'the Nabob M P's' as they were called, coming in for special ridicule. Thomson, Collins, Burns and other poets of the period are not devoid of references to things Indian, but we have to come to the next century for anything elaborate.

As is well-known to all students of English literature, the quest for themes relating to new countries which had still something of the air of mystery about them, was one of the essential aspects of the Romantic movement early in the nineteenth century It is in accordance with this impulse that we find Southey and Moore writing two poems of considerable length in which the scene is laid in India *The Curse of Kehama* by the former appeared in 1810, with its weird story of an Indian Raja taking dreadful vengeance on the murderer of his son. Being in possession of supernatural powers, he pronounces a terrible curse on the culprit, though he committed the crime only to save his daughter's honour He is to be denied sleep and his thirst is never to be quenched. Relief comes to the victim after intense suffering and wandering all over the

universe. He finds his peace in Death and awakes in heaven:

'All whom he loved he met, to part no more'

Southey claimed that the story was original 'though in all its parts,' as he said, 'consistent with the superstition upon which it is built.' It must be confessed there is nothing very attractive about the story or the execution: the whole poem is a curious jumble of things Indian, scraps of classical mythology mixed up with the folklore and beliefs of the lower classes of to-day. The pictures in the poem of barbarous callousness to all fine feeling, and relentless cruelty are rather difficult to reconcile with the traditions of the Indian people, or with the atmosphere of Hindu mythology which Southey has ignorantly characterised in his *Preface* as the most monstrous in its fables. One may, however, come across many interesting descriptive sketches in the poem, though they are not always faithful to Indian details. There is a Hindu funeral and a lurid picture of *Sati*, the latter somewhat resembling the authentic accounts we have had from spectators who have witnessed the grim rite, but mixed with a good deal of poetic exaggeration. There is the inevitable Banyan tree without which no picture of India can be complete

> It was a goodly sight to see
> That venerable tree
> For o'er the lawn irregularly spread,
> Fifty straight columns prop its lofty head

and we are told at the end

> So like a temple did it seem, that there
> A pious heart's first impulse would be prayer

If the proper names are all given in such a form as to make even identification difficult and inaccuracies abound in large number, it is surprising that sometimes Southey attains to a high standard of faithfulness. He

can describe the Elephant at the stream like one who has actually been in India :

> On comes the Elephant, to slake
> His thirst at soon as one pellucid spring
> Lo! from his trunk upturned, aloft he flings
> The grateful shower, and now
> Plucking the broad-leaved bough
> Of yonder plane, with wavy motion slow,
> Fanning the languid air
> He moves it to and fro.

He describes the Seven Pagodas on the Coromandel coast in Southern India with the faithfulness of a visitor :

> Spires were seen
> Peering above the sea—a mournful sight!
> Well might the sad beholder weep from thence
> What works of wonder the devouring wave
> Had swallowed here, when monuments so brave
> Bore record of their old magnificence.

As all visitors to that place are aware there is a rock-hewn fane here and there, resisting in its strength 'the surf and surge that on their deep foundations beat in vain.'

With Moore's *Lalla Rookh*, we come to a more attractive volume of verse dealing with India, with a romantic love-story containing minor episodes of considerable interest, all woven round an imaginary princess, Lalla Rookh, supposed to be the youngest daughter of Aurangzebe. Betrothed to the prince of Lesser Bucharia in whose favour his father had abdicated his throne, the princess who was described by the poets of her period as 'more beautiful than any of those heroines whose names and loves embellish the songs of Persia and Hindusthan,' went on a holiday to Kashmir where the actual ceremony of marriage was to take place. A handsome

young minstrel entertains her on the way with romantic tales of various kinds, till she falls in love with him and discovers to her agreeable surprise that he is the very prince to whom her father had betrothed her. The poem marked a turning point in Moore's literary career and he was quite gratified with the great success it had achieved. In a special preface to the poem written for the Collected Works, Moore is proud of the fact that it has been translated into German and acted as an opera in Russia. Quoting the testimony of many reviewers and Anglo-Indian authorities, he is delighted at the 'local fidelity' he has shown in his work as the result of careful study and preparation. He goes so far as to say that 'the spirit that had spoken in the melodies of Ireland soon found itself at home in the East.' It would be easy to disturb this complacency on the poet's part by drawing attention to various inconsistencies with the Indian atmosphere and even historical truth, but no useful purpose will be served by such an exposure. It may, however, be conceded that there are a large number of fine passages, some of which are well-known. The outburst of praise of the valley of Kashmere beginning with the well known lines

> Who has not heard of the Vale of Cashmere,
> With its roses the brightest that earth ever gave?

has found a place in Ward's *English Poets*. A less known, but equally beautiful passage is the short one in which the Peri in the tale of the *Paradise and the Peri* describes her first sight of the plains of India as she views them from an eminence

> The air of that sweet Indian land,
> Whose air is balm, whose ocean spreads
> O'er coral rocks and amber beds,
> Whose mountains, pregnant by the beam
> Of the warm sun, with diamonds teem,
> Whose rivulets are like rich brides,

> Lovely with gold beneath their tides,
> Whose sandal groves and bowers of spice
> Might be a Peri's paradise

There are also many interesting passages of Indian descriptive interest in the prose-passages with which the tales included in the volume are interspersed

To about the same period belongs the short narrative poem, entitled *The Plate of Gold*, written by Leigh Hunt, and relating to the falling of a plate of gold from heaven in the courtyard of a temple in Benares, with the inscription that it should be taken by one who was a real lover of humanity. It is not the mere distribution of alms from the profusion of one's riches that counts, it is the real spirit of charity and personal service to the afflicted that really matters—this is the lesson intended to be taught by the poem.

It was only natural that Byron, Shelley and Keats, with all their love of romance, should have been attracted to the East. But Byron's interest stopped with Eastern Europe and the adjoining Islamic countries of Asia from whose atmosphere he has borrowed many a theme for his tales in verse, though there is a passage in his works which contains, surprisingly enough, a prophecy of the Indian Mutiny, as people actually recognised it some years later.

There is not much of India in Shelley's *Lines to An Indian Air* except the title and the reference to 'champak odours,' and even the flower was perhaps only a name to Shelley. It is, however, highly significant of the romantic glamour with which Shelley associated India that he should make his Alastor find some peace and happiness in the valley of Kashmere, in the course of his restless quest for ideal beauty and love It will be remembered Alastor held his way, wandering on through Arabia and Persia and the wild Carmanian waste :

Till in the vale of Cashmere, far within
Its loneliest dell, where odorous plants entwine
Beneath the hollow rocks a natural bower,
Beside a sparkling rivulet he stretched
His languid limbs

And there he has a splendid vision of a veiled maid,

Her outspread arms now bare,
Her dark locks floating in the breath of night,
Her beauty bending eyes, her parted lips
Outstretched and pale and quivering eagerly.

She folds his frame in her dissolving arms, but alas it is only a momentary vision and the hope only stings his brain like despair

If Keats has no separate poem on India, one of the well-known episodes occupying almost a whole Canto of his *Endymion* is distinctly Indian Diana appears before Endymion, disguised as a maid of the Ganges who had followed Bacchus on his return from his triumphant conquest of India and who is now anxious to get back to her Gods, to the land of palms and the Ganges. Her beauty in distress makes a powerful appeal to the shepherd-lad of Latmos till he begins to love her, forgetful of all his solemn promises to Diana. Luckily it is Diana herself in disguise and everything therefore ends happily!

In spite of its brevity, reference must be made here to the short piece on *Rose Aylmer* by Walter Savage Landor, as Rose Aylmer is buried in Calcutta, having lived in that city with an uncle of hers who was then Chief Justice of the Calcutta High Court. It is perhaps not known to many that the tomb of the lady who roused these exquisite lines can be actually seen in Calcutta to-day

Rose Aylmer, whom these wakeful eyes
May weep, but never see,
A night of memories and sighs
I consecrate to thee

If high rank cannot be claimed for Mrs. Hemans as a poetess, there is no denying the fact that many of her narrative poems have a special charm for youth. One of her poems is entitled *The Indian City*, and refers to an unfortunate Hindu Muslim fight from which the communal fire-eaters of India to-day might draw inspiration if they were so inclined. A Mohamedan lad has unwittingly polluted a temple-tank, by venturing to bathe in it and he has been killed by the Brahmin priests of the temple for the offence. Vengeance, however, follows very speedily. His cause is espoused by a Mohamedan ruler and he destroys the city after the usual invasion and the fighting. The entire city is in ruins, the tiger and the serpent holding their sway, where peace and prosperity flourished at one time. It opens with a fine passage describing an Indian sunset, beginning with the words. 'Royal in splendour went down the sun.' It would be interesting to identify the source of this tale—Mrs. Hemans probably borrowed it from her husband who had formerly been a captain in the Bengal Lancers, though her marriage with him ultimately turned out to be very unhappy.

Elizabeth Barrett Browning has a fairly long poem in which the scene is laid in India—*A Romance of the Ganges* which describes seven maidens floating their little lamps on the Ganges to find if their lovers are faithful to them.

Of shell of cocoa carven,
  Each little boat is made
Each carries a lamp, and carries a flower,
  And carries a hope unsaid,
And when the boat hath carried the lamp
  Unquenched, out of sight,
The maiden is sure that love will endure
  But love will fail with light.
    The river floweth on.

Luti's lamp alone has died out and we have the somewhat unromantic conclusion that she will not weep for a faithless lover where she wept a loving father. It is doubtful if the interpretation given to the floating of the lamps is true,—they are perhaps only offerings of respect to the Ganges, though Elizabeth Browning had the authority of Thomas Moore for the belief, as he refers to it in his *Lalla Rookh* relying, in his turn, on Grandpré's *Voyage to the Indian Ocean*. But it is no use complaining against this pretty romantic interpretation of a common Hindu rite, as it is perhaps more suitable for the purposes of poetry.

Robert Browning ranged over such a large area of the world's history and literature for the subject-matter of his poems that it is not surprising that he went to the life of one of the early founders of the British Empire in India for a poem in his *Dramatic Idylls*. It is *Clive* and the poem celebrates an incident in the hero's early life which happened at Fort St. David in Southern India. There was a cheater at cards and Clive refused to pay, though his brother-soldiers had been bullied into doing so. He was challenged and he unfortunately missed his opponent. The cheater held his pistol to his head and told him he would spare his life, if he were asked to do so. Clive complied. He was next required to retract his charge of cheating. This demand being refused, his antagonist threatened to fire. "Fire and be damned," replied Clive "I said you cheated, and say so still and will never pay you!" The officer was so amazed with his bravery that he threw away his pistol. The poem is of special interest to me, if I may say so in passing, as I have often wandered as a student over the ruins of Fort St. David, at the very spot where this incident must have taken place.

Writing a poem on his esteemed friend Alfred Donnett, whom Browning used to call 'Waring' and who

had disappeared suddenly from the social life of London, he wondered if he had gone to India and become a new incarnation—*In Vishnuland What Avatar?* The Hindu pantheon has always been so hospitable that it is not surprising that the poet should have ventured to ask if he had also been annexed to it!

Among the numerous poems occasioned by the great Indian Mutiny was Tennyson's well-known piece on the *Defence of Lucknow*, a poem which he perhaps thought it his duty to write, specially as he was Poet-Laureate. He hardly missed celebrating a single national event of this kind, though it cannot be said that he was always equally successful. Attention may also be drawn here to the poem on the same subject by John Greenleaf Whittier under the title of the *Pipes at Lucknow*. The only other episode connected with the mutiny which has found treatment in an independent English poem is Palgrave's account of the massacre of the English on the river bank in Cawnpore, in a poem on the subject, found in his *Visions of England*.

In the mellower period of Tennyson's poetic activity, he wrote his *Akbar's Dream* drawing attention to the lofty ideals of universal peace and brotherhood dreamt of by the great Moghul emperor. The creed which Akbar tried to evolve at Fatehpur-Sikri with himself as the centre of the new faith, is raised to the heights of a sublime message. His great ambition is to wreathe a crown not only for the king

> But in due time for every Musalman,
> Brahmin and Buddhist, Christian and Parsee,
> Thro' all the warring world of Hindustan

an ideal glad which seems to be as far away from realisation to-day as it was in Akbar's own time. He hoped the time was not distant when there will no more be

> Fires of *Suttee*, nor wail of baby wife,
> Or Indian widow

even which has been realised only partially. It is interesting to note that the whole poem is based on the following inscription by Abul Fazl for a temple in Kashmir:

> "O God! in every temple I see people that see Thee, and in every language I hear spoken people praise Thee . . . . If it be a mosque people murmur the holy prayer, and if be a Christian Church people ring bell from love to Thee. Sometimes I frequent the Christian cloister and sometimes the mosque. But it is Thou whom I search from temple to temple."

Much cannot be claimed for Ruskin as a poet, but his Newdigate prize-poem was, curiously enough, on *Salsette and Elephanta*, on the cave-temples in the bay of Bombay. A description is attempted here of the interior of the caves, carvings and images and its quality can be determined by two circumstances; he had never been to India and he was competing for a prize as an under graduate student of nineteen years. The temples are to him only symbolical of superstition and he winds up with a prophecy that India will one day become entirely Christian:

> Truth calls and gladdened India hears the cry,
> Deserts the darkened path her fathers trod,
> And seeks redemption from the Incarnation God.

It is perhaps no use, especially in a study of this kind, indulging in what might have happened, if some of the English writers had actually come to India. But it is impossible not to regret that Ruskin did not come to this country and have an opportunity of describing some of the great monuments of Indian art, or the splendours of Himalayan and other natural scenery. His works should have been enriched by some more passages of the same kind as his famous description of St. Mark's at Venice, or the gorgeous scenery of the Alps seen from various points of vantage. Such references to Indian art as are now

met with in his works are extremely uncomplimentary, based on certain misrepresentations of the Indian genius.

To those familiar with the general style of Meredith's work, his somewhat effusive poem on the battle of Chillianwallah will perhaps come as a surprise. Its unconsciously amusing refrain, 'Chillianwallah! Chillianwallah!' detracts very much from the solemn dignity of a battle piece commemorating a national victory which it was intended to be, but it must be remembered that Meredith was quite young when he wrote it and it was sent off to *Chamber's Journal* in the first flush of the appearance of the news of the battle in England.

Before passing on to a consideration of the American poems dealing with India, bare reference may be made to some other pieces on Indian historical subjects. Sidney Dobell has thought it worth while writing on the battle of Ferozepore, Oscar Wilde has numerous references to British victories in India in his poems entitled *Ave Imperatrix* —he would like to know where the English soldiers are covering themselves with glory even as he is writing the poem an unrecorded incident in frontier warfare is celebrated by Sir Francis Doyle in his *Red Thread of Honour* where the distinction is ungrudgingly conferred upon an English soldier by the wild tribesmen who have fought with him, and Sir Henry Newbolt has got a ballad on Sir Pratap Singh, besides a spirited piece describing Gillespie's famous march from Arcot to suppress the mutiny at Vellore. It is an interesting observation for me that the horses must have thundered past my own native village on the occasion of the famous gallop to Vellore.

To bring the narrative to our own times, reference may be made to Sir William Watson's poem on the recent visit of the Prince of Wales to India, entitled *To India's Guest*. If the great doors of India's soul did not open out to

His Royal Highness, it was not the poet's fault and the whole poem is written in a lofty, dignified manner particularly suitable for ceremonial poems of this type. There is a fine realisation of the spirit of India in the concluding lines of the poem:

> This Soul of the East, majestic, grave, sedate,
> Grandiose of mien: a spirit from ours aloof,
>
> Yet revelled up for ever with the woof
> Of all our wondrous fate.

It is perhaps due to the somewhat adventurous and cosmopolitan spirit of the Americans that we have a large number of poems dealing with Indian subjects in the literature of that country. Emerson's lines on Brahma are among the most well-known, being based on some famous verses of the *Bhagavad Gita* describing the immortality of the soul. Emerson's regard for this great scripture of the Hindus is evident from numerous references to it in the course of his writings. There is an interesting parody of Emerson's lines by Andrew Lang which is perhaps not quite well-known:

> If the wild bowler thinks he bowls,
> Or if the batsman thinks he's bowled,
>
> They know not poor misguided souls,
> They too shall perish unconsoled.
>
> I am the batsman and the bat,
> I am the bowler and the ball.
>
> The umpire, the pavilion-cat,
> The roller, pitch and stumps and all.

Longfellow's acquaintance with the mythology of foreign nations was so prodigious that it would have been surprising indeed, if he had not touched the literature of India somewhere in the course of his wanderings among the books of the world. He has a short poem on King Trisanku of Hindu mythology for whose sake the sage

Vishwamitra is said to have created a heaven in mid-air, when he did not succeed in getting him admitted into the real heaven. The incident is, curiously enough, used by Longfellow, not for appreciating the humour of an emperor hanging in mid-air as is the traditional interpretation in all Indian literature, but for drawing a moral.

> Viswamitra the magician,
> By his spells and incantations,
> Up to India's realms Elysian
> Raised Trisanku, King of nations.
>
> Indra and the Gods offended
> Hurled him downward and descending
> In the air he hung suspended,
> With these equal powers contending.
>
> Thus by aspirations lifted,
> By misgivings downward driven,
> Human hearts are tossed and drifted
> Midway between earth and heaven.

James Russell Lowell wrote on Indian subjects too. His poem on *Mahmood, the Image-Breaker*, refers to the apocryphal story that when the conqueror carried Somnath before him, the priests of the temple offered him large sums of money, provided he spared the idol. But he insisted on breaking the idol, declining the great wealth offered to him.

> Luck shows the downright striker,
> From the hollow core
> Fifty times the Brahmin's offer
> Deluged all the floor.

This is not the only poem he has written on an Indian subject, but we must pass on.

Besides the poem on *Pipes of Lucknow* to which reference has been made already, Whittier has written some others. His *Brewing of Soma* describes the preparation

of the drink of the same mentioned in the Vedas, though it is to him only the brewing of superstition, his *Cypress-Tree of Ceylon* describes a magical tree mentioned by Ibn Batuta underneath whose boughs a number of silent yogis were always sitting awaiting the dropping of the sacred leaves, the eating of one of which could confer eternal youth and immortality. One of the hymns of the Brahmo Samaj introduced to America by the well known Brahmo preacher P. C. Majumdar is also rendered into English verse by Whittier.

Though there are a large number of references to India in the poems of Walt Whitman, there is only one independent poem on an Indian subject, *Passage to India*, of which it has however been rightly remarked, that it may be a passage to any country! To the vision of the poet, it represents the past, the Asiatic myths and the primitive fables, the wealthiest of earth's lands and so on

At the conclusion of this brief survey it may perhaps be said that none of the poems, English or American, display any profound insight into Indian life and it is not surprising indeed when we remember that the inspiration has been in all cases only from books or from second-hand references. With the more intimate knowledge of the country which is now being acquired, it is possible the twentieth century may witness better results than the century which has gone before In the antiquity of its civilisation, in the mystery of its moral and spiritual life, in its magnificent wealth of natural scenery and even in the pangs of the newer life into which it is striving to be born, there is perhaps inspiration enough for any poet.

P SESHADRI

Jingoism, a blustering, bragging manner, plentiful use of slang, broad humour, an incomplete quotation, all these have combined to prevent, in India at any rate, Kipling from occupying a high place among English poets He is condemned as being anti-Indian by many who have not read his works. I shall say nothing here of his short stories or of his novels; I shall confine my attention to his verse, and make an attempt to estimate its real worth

Rudyard Kipling has been unfortunate in belonging to the generation to which he belongs His poetic career began while Tennyson's mellifluous voice was still heard and Browning's verse was emerging from the obscurity of more than twenty years. Tennyson had become a legend. to make yourself a Tennysonian was to be on the side of grace, and Browningism was fast developing into a creed. Silently and subtly, but surely, Fitzgerald was beginning to cast his spell the half-sceptical melancholy, the vague longing for a world that yet was lovely, made the Persian Omar an English classic. Coming close after were the striking figures of William Morris, Swinburne and Meredith. Mediæval romance, passion at white heat, 'chaos illumined by lightning'; enchanted names and scenes, fervent enthusiasm for liberty in all its forms and shapes and hues; blend of psychology and imagination; these held public attention for a few years. Then, when Kipling might have been expected to come into his own, appeared on the horizon the meteoric figure of Oscar Wilde, half genius, half poltroon, the mystic Francis Thompson with his vision of 'a deep, but dazzling darkness;' Symonds with his wide humanism, the exuberant Le Gallienne. Condemn the 'nineties' as we may, decadent, æsthetic, cloying, characterise it as we like, while it flourished, nineties' verse

allowed no other note to become audible. A. E. Housman attempted to break the charm but in vain. 'A Shropshire Lad,' with its deep-seated and therefore quiet pessimism, its profound melancholy, its absence of enthusiasm, had to wait for more than twenty years for recognition. He sang before his due time of the laurels that were all cut of the world grown old, of the heart that's sold for endless rue; of lads that have had no luck at all. By the time these had had their day, and another race was to come, the venerable figure of Thomas Hardy like some Ancient of Days, moved into the realms of poetry, singing of the cruelty of time, of callous nature, of helpless humanity, of God's funeral. Soon came the war and the war-poets with their brief existence brightened with the gleam of fame—Rupert Brooke, Ralph Hodgson, Julian Grenfell, Edmund Blunden, S. Sasson, Robert Graves—who, passing through tears and famine and flame, severance and shock, saw yet the vision glorious, the distant gates of Eden, and 'did not dream it was a dream.' Now we have the Futurists, the Imagists, the Transcendentalists. In all these years, through all the stages of English poetry during the last forty and fifty years Kipling has been a solitary figure, singing successingly, rising occasionally to real poetic heights, but without receiving the meed of serious recognition. He has not attained the position which is his due.

* * * *

Kipling's poetic work falls into three main divisions: those dealing with Anglo-India, those relating to the services, and those on general themes. It will readily appear that on subjects such as these—that do not give much scope either to the imagination or to thought—verse cannot be expected to sound the abysmal deeps of personality, feeling cannot be very intimate and personal. These limitations are inherent, and they must constantly be kept in view. It will be futile to expect in them the

mystic vision of Dante's *Inferno*; we shall listen in vain to the awful notes of *Othello* or *Lear*, the heroic chords of Milton's verse will not be sounded; nor can we expect the melting romance of Spenser. They will inevitably be matter-of-fact, practical, business like; they will treat of familiar matter of to-day, they will not imagine so much as observe. There will be room, indeed, for humour, for pathos, for tears; they will be a leaf out of the book of life. They will not be tinted with the rainbow hues of the sky, nor will they echo the roar of the thunder. They will describe earthly life, with all its many aches and its ecstasies. And if in dealing with reality the poet can ever and anon have a vision of glory, to that extent will he succeed in lifting poetry from the level of historical narrative. If he sees romance in the streets and beauty in the barracks, he is a genuine poet. A great man had a melancholy friend in distress who told him in surprise that, in spite of his troubles, cheerfulness kept breaking in. So for the true seer beauty and loveliness never pass away; the dirt and the dress, the squalor and the smoke, all conceal the mystic wonder which the poet both discovers and interprets. But because of the materials he uses, the atmosphere he creates, the environment in which he works, emotional intensity or concentration is not possible.

The simple art of

"Strew on her roses, roses",

the energy of

"There was a sound of revelry by night";

the deep-rooted dejection of

"A grief without a pang, void, dark, and drear"

the abandon of

"Drink to me only with thine eyes",

the appeal of Kent's

"Vex not this ghost,"

or of Othello's last speech, or the marvel of Hamlet's

"The rest is silence"—

these are achievements beyond the range of the singer who keeps his eyes on the ground. Nor have we any right to expect him to soar thus high: his aim is different.

Before I deal with the content of Kipling's work, I may say a word on his style. Wordsworth had rebelled against the inane phraseology of the classicists and had preached a doctrine that led Byron to describe him as one

"Who both by example and by precept shows
That prose is verse and verse is merely prose."

Coleridge used, in his best pieces, simple words, but how marvellously did he use them:

"Alone, alone, all, all alone,
Alone on a wide, wide sea."

Shelley was not particularly influenced by this revolt against poetic diction, but Byron, in *Don Juan* and *Vision of Judgment* was the first to demonstrate that poetic diction was not essential to great poetry, that ordinary expressions could be made to do duty, that indeed vulgar and slang words could find place in verses of great poetic excellence, and that triviality of phrase and sublimity of thought could be blended together

"As he drew near he gazed upon the gate
Ne'er to be entered more by him or Sin,
With such a glance of supernatural hate,
As made Saint Peter wish himself within;
He pattered with his keys at a great rate,
And swore (though his apostolic skin:
Of course his perspiration was but ichor,
Or some such other spiritual liquor."

But soon came Tennyson with his verses faultily faultless, sweet and rounded, and then Swinburne even more perfect in phrasing. The Victorian tradition was thus one of correct, formal, careful expression. Matthew Arnold was its great prose phrase-coiner, words regained once more their lost importance, phrase became once again a matter of moment. Browning, it is true, was the exception, but even he was capable of such exquisite lines as:

> "That's the wise thrush: he sings each song twice over,
> Lest you should think he never could re-capture
> The first fine careless rapture."

On the whole, however, he was a rebel, writing a passage like the following from *Pompilia*:

> "I spent a good half hour, paced to and fro
> The garden; just to leave her free awhile.
> I might have sat beside her on the bench
> Where the children were. I wish the thing had been,
> Indeed, the event could not be worse, you know.
> One more half-hour of her saved! She's dead now,
> sirs!"

or the following from *Too Late*:

> "I liked that way you had with your curls,
> Wound to a ball in a net behind.
>
> Your cheek was chaste as a quaker girl's,
> And your mouth—there was never, to my mind,
>
> Such a funny mouth, for it would not shut,
> And the dented chin, too—what a chin!
>
> There were certain ways when you spoke, some words
> That you know you never could pronounce.
>
> You were thin, however, like a bird's
> Your hand seemed—some would say, the pounce
>
> Of a scaly-footed hawk,—all but!
> The world was right when it called you thin."

The heritage of Victorian poetry continued, despite Browning's example, to be purity, lusciousness, choiceness

of phraseology, and when Kipling began writing his manner seemed jarring, harsh and crude. The 'decadents' made style yet more exquisite, and Kipling was regarded as a rude rhymer not worthy to be classed with such 'precious' artists as the contributors to the Yellow Book. Kipling did employ many cockney expressions, many phrases known to the Tommy alone and only heard in his Barracks, many words which Anglo-Indians alone could understand; he took great liberties with spelling, he manipulated pronunciation; he used an aggravatingly large number of abbreviations. His punctuation was haphazard. And all this cost him heavily; he suffered grievously for his mannerism. Now that the Georgians have been responsible for greater excesses, have made verse totally 'free,' have bid goodbye to grammar and idiom, Kipling is thought to be old-fashioned. But it is worth while observing that of the singing ballad, written in dialect, no one is a greater master. Has he not been called the Apollo of the Banjo?

* * * *

Kipling's early career was in India at Allahabad and Lahore. From my room in the University I can see the office where he worked. In the Eighties and I sometimes see in imagination the young bushy-browed, bespectacled young assistant sitting at his table, editing telegrams, reading blue-books, writing editorial notes, and then lost in thought, abstracting himself to the world of Kim and the Zemzammas. No English poet has written of India with such intimate knowledge. Politics, religion, civil life,—every aspect is touched by him, and according to the mood of the moment, touched with laughter or irony or tears. Even in the most boisterous and frivolous pieces the eternal note of sadness can be detected, and if it is sometimes difficult to tell on which side his own sympathies are, is that not true of most great poets?

The Indian poems deal either with some early legends, or some aspect of modern life, or else with Anglo Indian administration. Some of the pieces belonging to the first category are perfectly delightful. What Hindu child has not heard from the lips of a grandmother or an old maid of stories related by Shiva to Parvati and hundreds of moral conundrums offered by her to him for solution? Here, in Kipling, is one entitled "Shiva and the Grasshopper"

Shiva, who parted the harvest and made the winds to blow,
Sitting at the doorways of a day of long ago,
Gave to each his portion, food and toil and fate,
From the King upon his guddee to the Beggar at the gate

All things made He—Shiva the Preserver
Mahadeo! Mahadeo! He made all,—
Thorn for the camel, fodder for the kine,
And Mother's heart for sleepy head, O little Son of mine!

Wheat he gave to rich folk, millet to the poor,
Broken scrapes for holy men that beg from door to door,
Cattle to the tiger, carrion to the kite,
And rags and bones to wicked wolves without the wall at night.
Neughts he found too lofty, none he saw too low—
Parbati beside him watched them come and go;
Thought to chast her husband, turning Shiva to jest—
Stole the little grasshopper and hid it in her breast.

So she tricked him, Shiva the Preserver,
Mahadeo! Mahadeo, born and sad
Tall are the camels, heavy are the kine,
But this was Least of Little things, O little Son of mine!

When the dole was ended, laughingly she said,
"Master, of a million mouths, is not one unfed?"
Laughing, Shiva made answer, "All have had their part,
Even he the little one, hidden neath thy heart."
From her breast she plucked it, Parbati the thief,
Saw the Least of Little Things, gnawed a new green leaf!

Saw and feared and wondered, making prayer to Shiv,
Who hath surely given rest to all that live!

All things made he—Shiv is the Preserver
Mahadev! Mahadev! He made all,—
Thorn for the camel, fodder for the kine,
And Mother's heart for sleepy head O little Son of mine!"

Or, take next, "A Song of Kebir"

"Oh, light was the world that he weighed in his hands!
Oh, heavy the tale of his fields and his lands!
He has gone from the *guddee* and put on the shroud,
And departed in guise of *bairagi* avowed!

Now the white road to Delhi is rent for his feet,
The *Sal* and the *Kikar* must guard him from heat
His home is the camp, and the waste, and the crowd—
He is seeking the way, as *bairagi* avowed!

He has looked on man, and his eyeballs are clear—
(There was One, there is One, and but One, saith Kabir)
The Red Mist of Doing has thinned to a cloud—
He has taken the path for *bairagi* avowed!

To learn and discern of his brother the clod,
Of his brother the beast, and his brother the God,
He has gone from the council and put on the shroud,
('Can ye hear?' saith Kabir), a *bairagi* avowed!"

These two poems are enough to show how thoroughly Kipling has entered into the spirit of Hindu tradition and how faithfully he is able to depict the Hindu mind. The trust in an all-seeing, all protecting God, the confidence that whatever He does is for the best, the ideal of sacrifice, of renunciation, of the lowly path of poverty, and the curious mixture of faith and fatalism—all this he has appreciated and described. One imagines some itinerant *sadhu*, or mystic villager must have let him have a glimpse of these *arcana*.

But he is not silent about familiar matter of to-day. All that he saw around him he treasured in his memory: the small club talk, the hill exodus, the station scandals,

the pettiness of the mighty and the patient heroism of the poor. The honesty of the humble, over-driven, hard-used Indian 'bearer' is brought out in the poem 'Gunga Din' with its last lines

> "Though I've belted you and flayed you,
> By the livin Gawd that made you,
> You're a better man than I am, Gunga Din!"

The devotion and the comaraderie of the Indian soldier is the theme of the poem 'The Grave of the Hundred Dead'

The most interesting and amusing pieces are those that relate to Anglo Indian life and administration. One of the best is this, "The Post that Fitted"

> *Though tangled and twisted the course of true love,*
> *This ditty explains,*
> *No tangle so tangled it cannot improve*
> *If the lover has brains.*

Ere the steamer bore him Eastward, Sleary was engaged to marry
An attractive girl at Tunbridge, whom he called "my little Carrie"
Sleary's pay was very modest, Sleary was the other way
Who can cook a two-plate dinner on eight poor rupees a day?
Long he pondered o'er the question in his scantily furnished quarters—
Then proposed to Minnie Boffkin, eldest of Judge Boffkin's daughters.
Certainly an impecunious Subaltern was not a catch,
But the Boffkins knew that Minnie mightn't make another match.
So they recognised the business and, to feed and clothe the bride,
Got him made a Something Something somewhere on the Bombay side
Anyhow, the billet carried pay enough for him to marry—
As the artless Sleary put it "Just the thing for me and Carrie"
Did he, therefore, jilt Miss Boffkin,—impulse of a baser mind?
No! He started epileptic fits of an appalling kind

[Of his *modus operandi* only this much I could gather —
"Pears's shaving sticks will give you little taste and lots of lather."]

Frequently in public places his affliction used to assail
Sleary with distressing vigour—sits ays is the Boffkin's sight.
Ere a week was over Minnie weepingly returned his ring,
Told him his "so happy weakness" stopped all thought of marrying

Sleary bore the information with a chastened holy joy,—
Epileptic fits don't matter in Political employ,—
Wired three short words to Carrie—took his ticket, packed his kit

Bade farewell to Minnie Boffkin in one last, long, burning fit.
Four weeks later Carrie Sleary read—and laughed until she wept.
Mrs. Boffkin's warning letter on the "wretched epilept"
Year by year, in pious patience, vengeful Mrs. Boffkin sits
Waiting for the Sleary babies to develop Sleary's fits."

The next poem, that in these days of retrenchment has a topical flavour, deals with Sir Auckland Colvin, and is entitled "The Repsiyat of Omar-Kal'vin" : a brilliant parody, full of wit and delicate irony. Indeed, many of the Anglo-Indian verses are marked by these two qualities.

* * *

No English poet, I think, is more popular in the Army than Kipling. I have myself heard several poems of his quoted with enthusiasm and gusto by Tommies in their barracks, not on ceremonial occasions and in formal recitations, but as part of their daily speech. He speaks a language that they know, he describes things familiar to them; more than everything, he expresses their feelings exactly as they themselves would if they had the gift of expression. The soldier all over the world appreciates kindness. He has primal impulses, be good to him, and there is nothing he will not do for you. He has chosen to join a school of hardship and iron discipline, all that

he asks for is that you will be a frank comrade to him. A little goodwill, a little gentleness, a soft word, a kind look, and he is your slave. He has no home but the barracks, no family save the members of his section, no guide save his officer. All his loyalties are for his uniform which he will not stain and for his unit whose reputation he will not sully. Send him from East to West, he will not mind it, put him on to any dirty, he will work with a will. Yet underneath the apparent roughness and boisterousness and noise of his life there runs a current of pathos. And Kipling—in spite of the loud clang of his verse—sets on this current of pathos and reproduces it. That is how he becomes par excellence the Soldier's Poet. He speaks of Tommy with respect and affection. The Prelude to 'Barrack Room Ballads' is addressed to Thomas Atkins:

> "I have made for you a song,
> And it may be right or wrong,
> But only you can tell me if it's true.
> I have tried for to explain
> Both your pleasure and your pain,
> And, Thomas, here's my best respects to you!
>
> O there'll surely come a day
> When they all give you all your pay,
> And treat you as a Christian ought to do,
> So, until that day comes round,
> Heaven keep you safe and sound,
> And, Thomas, here's my best respects to you!"

I shall quote only one more soldier-poem, 'Tommy,' because of its righteous indignation

> "I went into a public—'ouse to get a pint o' beer,
> The publican 'e up an' sez, "We serves no red-coats here."
>
> The girls behind the bar they laughed an' giggled fit to die,
> I outs into the street again an' to myself sez I

O it's Tommy this, an' Tommy that, an' "Tommy, go away",
But it's "Thank you, Mister Atkins," when the band begins to play—
The band begins to play, my boys, the band begins to play,
O it's "Thank you, Mister Atkins," when the band begins to play.

I went into a theatre as sober as could be,
They gave a drunk civilian room, but 'ads't none for me,
They sent me to the gallery or round the music—'alls,
But when it comes to fightin', Lord! they'll shove me in the stalls!

For it's Tommy this, an' Tommy that, an' "Tommy, wait outside",
But it's "Special Train for Atkins" when the Trooper's on the tide"—
The troopship's on the tide, my boys, the troopship's on the tide,
O it's "Special Train for Atkins" when the trooper's on the tide.

Yes, makin' mock o' uniforms that guard you while you sleep
Is cheaper than them uniforms an' they 're starvation cheap,
And hushin' drunken soldiers when they're goin' large a bit
Is five times better business than paradin' in full kit.

Then it's Tommy this, an' Tommy that, an' "Tommy, 'ow's yer soul?"
But it's "Thin red lines of 'eroes" when the drums begin to roll—
The drums begun to roll, my boys, the drums begun to roll,
O it's "Thin red lines of 'eroes" when the drums begin to roll

We aren't no thin red 'eroes, nor we aren't no blackguards too,
But single men in barricks, most remarkable like you,
An' if sometimes our conduck isn't all your fancy paints,
Why, single men in barricks don't grow into plaster saints,

While it's Tommy this, an' Tommy that, an' "Tommy, fall behind,"
But it's "Please to walk in front, sir," when there's trouble in the wind—
There's trouble in the wind, my boys, there's trouble in the wind,
O it's "Please to walk in front, sir," when there's trouble in the wind.

You talk o' better food for us, an' schools an' fires, an' all:
We'll wait for extra rations if you treat us rational
Don't mess about the cook-room slops, but prove it to our face
The widow's uniform is not the soldier man's disgrace.

For it's Tommy this, an' Tommy that, an' "Chuck him out, the brute!"
But it's "Saviour of 'is country" when the guns begin to shoot;
An' it's Tommy this, an' Tommy that an' anything you please,
An' Tommy ain't a blooming fool—you bet that Tommy sees!"

* * * *

Before I refer to his poems on general subjects, let me devote a few lines to the charge of 'Jingoism' so often brought against Kipling. His generation had forgotten both 'the blind hysterics of the Celt' and 'the red foul-fury of the Saxon'; the memories of Chartism and the Crimean War had become dim, and the disputes between Science and Religion had been put aside. Victorianism reached its apotheosis in the two Jubilees of 1887 and 1897. Imperial expansion, material prosperity, middle-class rule, Tory democracy, Indian servants standing behind the Queen, alliances of the house of Windsor with several continental reigning dynasties—all these persuaded the Englishman that God was very much in His heaven, and all was certainly well with the world. Tennyson wore a crown of light. Gladstone and Disraeli trod the political stage like giants.

Huxley, Tyndall and Herbert Spencer wore the mantle of prophets. Carlyle and Ruskin rumbled darkly, but their voice was drowned in the paeans of self-complacency. No wonder self-satisfaction was the main feature of later Victorian thought, and no wonder pride of race, consciousness of national achievements, sense of glory in membership of an Empire on which the sun never sets should characterise the literature of this generation. Not until the Boer War had broken out did Jingoism receive a shock and self-questionings and searchings of the heart begin. It cannot be urged as a special criticism of Kipling that in verses treating of Imperial subjects he reveals an Imperialistic outlook. Most others at the time were similarly Imperialistic. The question to be asked, rather, is Is his Imperialism of an offensive kind? And in any case the question is one more of politics than of poetry. "The Song of the Cities", "The Houses", "The Young Queen"—these are all stirring verses with no arrogance in them.

* * * *

But let me finally draw attention to another kind of work which also appears in large volume in most of his publications—verses that deal with eternal verities, with fundamental problems, with the mystery and the wonder of the miracle called life with the inscrutable ways of Providence, with the mighty living and the mighter dead. Has anyone, looking before and after, solved the riddle? Poets and philosophers have dreamt dreams and seen visions, preachers and professors have dogmatised; scientists have involved themselves in yet deeper labyrinths—and we are nowhere near the light. Is there light and must we always seek, never find? Doubt and denial, instinct struggling against reason, science baffling faith; passionate devotion to the older sect, cold subservience to sunless creeds—with all this the mid-Victorian was familiar, through all these phases he had passed. And what was his momentous

decision? What was the word of the Oracle? The most succinct expression it found is a rendering of a mediæval Persian poet

> "Unborn Tomorrow and Dead Yesterday—
> Why fret about them, if Today be sweet?"

Omar Khayyam, as presented by Fitzgerald, became the Holy Book of the Victorians. His refusal to see beyond the immediate present was not, however, to satisfy the generation that was not so drunk with the sense of success and prosperity, and obstinate questionings came and came again. They could not be hushed. They were clamant for answer.

What is Kipling's answer? I venture to think that his attitude is very like Thomas Hardy's, in the last analysis. Hardy's "God's Funeral" is one of his grimmest utterances, but here is his "God's Education"

> "I saw him steal the light away
> That haunted in her eye
> It went so gently none could say
> More than that it was there one day
> And missing by-and-by
>
> I watched her longer, and he stole
> Her lily tints and rose,
> All her young sprightliness of soul
> Next fell beneath his cold control,
> And disappeared like these.
>
> I asked "Why do you serve her so?
> Do you for some glad day,
> Hoard these her sweets—?" He said, "Oh,
> They charm not me, I bid Time throw
> Them carelessly away"
>
> Said I "We call that cruelty—
> We, your poor mortal kind"
> He mused. "The thought is new to me
> Forsooth, though I men's master be,
> There is the teaching mind!"

What does this poem exactly mean, or a dozen others that can be selected out of Hardy? God's helplessness or God's callousness, perhaps; perhaps, too, a difference in the values; perhaps pity for God or anger against God—but ultimately perhaps a conviction that it is futile to appeal to God. He is helpless in Time's hands like the puniest and frailest of mortals. Time is the great master, relentless, mighty, elemental. Here is Kipling's poem, 1892, entitled, "The Answer":

> A rose, in tatters on the garden path,
> Cried out to God and murmured 'gainst His wrath,
> Because a sudden wind at twilight's hush
> Had snapped her stem alone of all the bush,
> And God who hears both sun-dried dust and sun,
> Had pity, whispering to that luckless one
> "Sister, in that thou mayest wait did not well—
> "What voices heardst thou when thy petals fell?"
> And the Rose answered "In that evil hour
> "A voice said, 'Father, wherefore falls the flower?
> "'For lo, the very gossamers are still?
> "And a voice answered, 'Son by Allah's Will!'"
> Then softly as a rain-mist on the sward,
> Came to the Rose the Answer of the Lord:
> "Sister, before we smote the Dark in twain,
> "Ere yet the Stars saw one another plain,
> "Time, Tide and Space, we bound unto the task
> "That thou shouldst fall, and such as one should ask."
> Whereat the withered flower, all content,
> Died as they die whose days are innocent,
> While he who questioned why the flower fell
> Caught hold of God and saved his soul from Hell!"

What is the riddle? Is there an answer? None, save that things happen as it is written that they shall happen, and that God must Himself, to preserve his Godhood, do as it is decreed. Small comfort, little consolation but this is all the poet vouchsafes. More he will not tell. Another poem, with a similar content, is the Prelude to "Puck of Pook's Hill".

"Cities and Thrones and Powers
Stand in Time's eye,
Almost as long as flowers,
Which daily die:
But, as new buds put forth
To glad new men,
Out of the spent and unconsidered Earth,
The Cities rise again.

This season's daffodil,
She never hears,
What change, what chance, what chill,
Cut down last year's;
But with bold countenance,
And knowledge small,
Esteems her seven days' continuance
To be perpetual.

So Time that is o'er-kind
To all that be,
Ordains us e'en as blind,
As bold as she:
That is our very death,
And burial sure,
Shadow to shadow, well persuaded, saith,
"See how our works endure!"

The spirit of the men who toil and spin and sweat and die, not because they gain but because of something within them that does not let them rest and urges them on to fresh effort and new endeavour, who go from danger to danger and greet peril with a smile the spirit of such as these has never found better expression, not in Shelley nor in Browning, than in Kipling's "The Song of the Dead." No challenge is here, no defiance; a plain statement that yet moves more than rhetorical skill

"We were dreamers, dreaming greatly, in the man-stifled town;
We yearned beyond the sky-line where the strange roads go down.

Came the Whisper, came the Vision, came the Power with the Need,
Till the Soul that is not man's soul was lent us to lead
As the deer breaks—as the steer breaks—from the herd where they graze—
In the faith of little children we went on our ways
Then the weed failed—then the food failed—then the last water dried—
In the faith of little children we lay down and died.
On the sand-drift—on the veldt-side—In the fern-scrub we lay,
That our sons might follow after by the bones on the way.
Follow after—follow after! We have watered the root,
And the bud has come to blossom that ripens for fruit!
Follow after—we are waiting, by the trails that we lost,
For the sounds of many footsteps, for the tread of a host
Follow after—follow after—for the harvest is sown:
By the bones about the wayside ye shall come to your own!"

The poet who teaches us that the game is more than the player, and the ship is more than the crew is uttering a new note to which the poor modern needs to listen. That is Kipling's main contribution. He gives us the tonic we need and gives it a form we understand. He speaks in the language of the common men and from their level: he is no Olympian threatening of the wrath to come nor an Oracle on the tripod telling a tale signifying nothing. The words look trivial, but they sound true. The form is rough but conceals fine art, and more than all, the message is one to which we shall respond more and more, and feel that here is the authentic voice of our century—finding no comfort in thought of God, seeing much misery and disgrace, but withal holding to the anchor, pointing the way to Light and bidding us have hope, for some there still are that do not shame their kind,' not even with that wind blowing and that tide!

AMARANATHA JHA

DRAMATIC CRITICISM OF THE ROMANTIC REVIVAL A CRITICAL SURVEY

"The most remarkable achievement of Romantic prose was in providing the formal vesture of Romantic criticism. In the hands of Hazlitt, Lamb, Coleridge . . . the art of literary appreciation underwent a development so extraordinary and so sudden, that it may fairly be called a Renascence."[1] Still the way was being prepared from some thirty years ago. Morgann and Richardson, though limited in scope as compared with the greater critics of the Revival were, no doubt, precursors of the new criticism that was in their own time, yet to arrive. Morgann's *Essay on Falstaff* published in 1777 is, in several ways, an anticipation of Coleridge; and rightly does Nichol Smith observe that "there is nothing greater—perhaps nothing so great—in Coleridge or Hazlitt."[2] It was to their loss that none of the three greater Shakespearian critics of the Revival knew anything about a work which practically laid down the foundation of nineteenth century criticism by enunciating the now well-known dictum—"In dramatic criticism the impression is the fact." Such a statement as "the understanding seems for the most part to take cognizance of actions only, and from these infer motives and character; but the sense we have been speaking of proceeds in a contrary course, and determines of actions from certain first principles of character, which seem wholly out of the reach of the understanding,"[3] anticipates Coleridge by more than a quarter of a century.

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[1] C. H. Herford—*The Age of Wordsworth* p. 48

[2] *The Dramatic Character of Falstaff*, p. 177

[3] Ibid., p. 178.

He is also first to point out the peculiar vitality of Shakespeare's characters which makes them more historic than dramatic beings. We all know how this point of view influenced Shakespearian criticism for nearly a whole century immediately following.

Richardson, who followed with *A Philosophical Analysis and Illustration of some of Shakespeare's Remarkable Characters* in 1774, though not as great as Morgann yet helped in originating that speculative vein in Shakespearian criticism which was fraught with so much consequence to both criticism and drama in later years. The special emphasis that he laid on Shakespeare's presentation of the passions and affections may have had a good deal to do with Joanna Baillie, Coleridge and other dramatic writers of the Revival period; and perhaps even Lamb's *Specimens* was not altogether uninspired by him. The repercussion of such a critical outlook in respect of Shakespearian plays, on their treatment in the theatre itself, may be seen from a Drury-Lane announcement of 1808 when the management offered *The School of Shakespeare*, a play of shreds and patches made out of five of his plays arranged in the following order :—

Act I Ambition. From the prophecy of the witches to the murder of Duncan. (Macbeth)

Act II. Vanity The robbery at Gadshill and Falstaff's account of it. (Henry IV, pt. I.)

Act III. Revenge Shylock's appeal to the Duke (Merchant of Venice.)

Act IV. Cowardice. Aguecheek's preparation for the duel. (Twelfth Night)

Act V. Slander. The rejection of Hero. (Much Ado)[1].

[1] W C Oulton—*History of the Theatre*, Vol. I, pp. 138-9; and John Genest—*An Account of the English Stage*, Vol VIII, p 75.

Of course it must be admitted that nineteenth century criticism is marked by greater freedom of movement, by clearer signs of real pleasure in writing and speaking about the Elizabethan writers, in general, and about Shakespeare, in particular. The purpose of criticism came to be to interpret and not to sit in judgment. They did not hold with Johnson that it was necessary to confess faults in order to gain credit for praise. The new critics were nothing if not ardent, enthusiastic and sincere.

It must also be owned that Lamb, Coleridge and Hazlitt introduced the minor Elizabethans. Dodsley's collection of Old Plays had certainly preceded the Lamb period, but it scarcely gained any general notice. Ben Jonson and Fletcher seem to have been in some degree popular. Even the strolling player in the *Vicar of Wakefield* could exclaim that "our taste has gone back a whole century. Fletcher, Ben Jonson, all the plays of Shakespeare, are the only things that go down."[1] If, however, the major writers were popular, the eighteenth century knew little of the lesser Elizabethan playwrights.

Towards Shakespeare the attitude of these nineteenth century critics is one of frank and passionate idolatry. It was Lamb, Coleridge and Hazlitt who originated that "bardolatry" which is intolerant of anything except critical flunkeyism, and which dominated more or less the critical attitude of the whole century. Not content with this, they proceeded even farther and declared that Shakespeare's contemporaries and immediate successors were all dramatists "of such surpassing excellence, that men despair to look upon them like again." Thus, during the opening years of the century English dramatic criticism, led by the Lamb-group, came to be characterised

[1] P. 111 (Temple Classics Ed.)

by indiscriminate enthusiasm for all that came down from the golden age of English drama.

Lamb first led the way in *The Specimens of English Dramatic Poets who lived about the time of Shakespeare* (1808). In 1801 he had already shown in his *John Woodvil* "a fine fragrance of Elizabethan manner." His special merit as a critic lies in feeling "the charm of an old poet or moralist and in the ability to interpret that charm, to convey it to others."[1] His criticism of poetry like poetry itself is an act of imagination of which the text he takes, is only the starting point. It is on this account that his notes on the old dramatists are so fascinating. He resists to their poetry much in the same fashion as Macaulay does to certain passages in *Paradise Lost*, and new forms of beauty start at once into existence and all the burial places of memory give up their dead. Take for instance, his comments on *The Duchess of Malfi* :—

"What are 'Lake's iron crown,' the brazen bull of Perillus, Procrustes' bed, to the waxen images which counterfeit death to the wild masque of madmen, the tomb-maker, the bellman, the living person's dirge, the mortification by degrees! To move a horror skilfully, to touch the soul to the quick, to lay upon fear as much as it can bear, to wean and weary a life till it is ready to drop, and then step in with mortal instruments to take its last forfeit—this only Webster can do. Writers of inferior genius may "upon horror's head horrors accumulate" but they cannot do this. They mistake quantity for quality, they "terrify babes with painted devils," but they know not how a soul is capable of being moved, their horrors want dignity, their affrightments are without decorum!" This is the very ecstasy of poetic criticism. It is a creation rather than an interpre-

[1] Pater—*Appreciation*.

tation of Webster. The melody of Bosola's pessimistic monody —

> "Their life a general mist of error
> Their death a hideous storm of terror etc" (IV, 2 197 ff)

and the impassioned rhetoric of the Duchess dying speech.

> " " " " Come violent death,
> Serve for mandragora to make me sleep! (IV, 2 243-44 ff)

fired Lamb's enthusiasm to such a degree as to make him over reach himself The passage, no doubt, is remarkable, any beautiful as a piece of poetic prose such as few besides Lamb could write to perfection, but it has only a very remote application to Webster as a dramatist. Lamb is interested in the passion and the poetry of Webster, not in his peculiar dramatic qualities. His professed object as critic is not so much to point out the dramatic value of these old plays as to reveal their life and humanity, and to familiarise the reader with the poetry and the literary beauty in them "The kind of extracts," says Lamb in his preface, "which I have sought after, have been not so much passages of wit and humour though the old plays are rich in such, as scenes of passion, sometimes of the deepest quality, interesting situations, serious descriptions, that which is more allied to poetry than to wit, and to tragic rather than to comic poetry, and again "my leading design has been to illustrate what may be called the moral sense of our ancestors" But the serious drawback of such a point of view is that it frequently leads one into the obvious fallacy of making the part greater than the whole. It relaxes judgment in favour of mere poetry and confounds literary with dramatic qualities As a play *The Duchess of Malfi* has serious blemishes, yet Lamb seems not even to suspect their existence. Webster glaringly violates probability on more than one occasion. The Duchess secretly marries Antonio and has three children She is closely watched by Bosola,

but nobody appears to be any the wiser for it. Again, her brothers' opposition to the Duchess' marrying a second husband seems to be altogether unmotivated, and therefore, dramatically faulty. Webster probably realises this rather late in the day when, towards the close of the play, Ferdinand is made to tell us that the Duke (her brother) had hoped "to have gained an infinite mass of treasure by her death." Apart from the physical horrors of the play which, in spite of Lamb, are not wanting in quantity, these are surely serious defects, but Lamb clearly ignores them in his critical rhapsody.

To take yet another example—Lamb, commenting on Ford's *The Broken Heart*, goes off into another, and I should think, a worse, rhapsody. Referring to the scene in which the nuptials of Prophilus and Euphranea[1] are celebrated he speaks of Calantha's unnatural and monstrously affected callousness, as "a holy violence against her nature," and thinks that "the expression of this transcendant scene almost bears us in imagination to Calvary and the Cross." Could there be anything more grotesque than such exaltation of a scene of such absurd affectations, a scene that remains unconvincing despite Calantha's later explanation?

> Oh my lords,
> I but deceived your eyes with antick gesture,
> When one news straight came huddling on another
> Of death, and death, and death, etc., etc. (V. 3. 11, 67 ff)

The light reflected, in this instance even to a greater degree than in the previous is the light bestowed; these funereal affectations of Calantha as glancing off the highly refractive mind of Lamb, are transformed and sublimed into a spectacle of holy agony like that of Christ on the height of

[1] *The Broken Heart*, Act V, Sc. 2.

Calvary.[1] The whole picture is recreated in the heart and brain of Lamb. Yet another instance of the critic's almost blind adoration of the ancients is found in his notes on Tourneur's *The Revenger's Tragedy*. "The reality and life of the dialogue in which Vindici and Hippolito first tempt their mother, and then threaten her to death for consenting to the dishonour of their sister, passes any scenical illusion I ever felt" says Lamb, and finds that the brothers rebuke their mother "in words more keen and dagger-like than those which Hamlet speaks to his mother." The scene was doubtless inspired by the scene in Hamlet where the hero taxes his mother, but what are these words of which Lamb makes so much?

> *Mother* Art not I your mother?
> *Vin.* Thou dost usurp that title now by fraud,
> For in that shell of mother breeds a bawd.[2]
> *Mother* A bawd! O name far loathsomer than hell.

Does Hamlet for one instant forget that he is speaking to his mother? To him, his mother's unchastity is "such an act that blurs the grace and blush of modesty"[3] and must needs remain nameless whereas Tourneur handles the vulgar word as if to underlines it.

It must be owned that Lamb's criticism is no pose or affectation. He is sincere in his unbounded admiration. His criticism is true, but true for him only. It is temperamental, personal, and subjective; and that is at once the weakness and the strength of his art. He like his follower —Walter Pater—creates anew what he criticises.[4]

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[1] Cf. Gosse's remarks—"Why is it forbidden to point out how violent and excessive they (the Elizabethan playwrights) are, how wearisome in their iterations, how confused, wordy, and incoherent." The Atlantic Monthly, 1902, p. 154.

[2] Act IV, 4, 11, 8-11

[3] Hamlet, Act 4, 11, 40-41

[4] Cf. Pater's exposition of La Gioconda. Renaissance (pocket ed.), pp. 129-130.

Lamb's remarks on Massinger are of considerable interest as showing what he was admiring in the old dramatists. "Massinger had not," says he, "the higher requisites of his art in anything like the degree in which they were possessed by Ford, Webster, Tourneur, Heywood, and others. He never shakes or disturbs the mind with grief. He is read with composure and placid delight. He wrote with equability of all the passions, which made his English style the purest and most free from violent metaphors and harsh construction of any of the dramatists who were his contemporaries." There is not a word here about his skill in drama. Who would deny the fact that his *A New Way to pay Old Debts* was one of the very few plays that survived on the stage longer and more generously than any other non-Shakespearian play? The place that Lamb assigns to him is certainly due to the comparative absence in his work of those purple patches which Lamb regards as "the higher requisites of his art." William Archer, whose knowledge of the drama and the dramatic is recognised to be of the highest order and who, as a critic, has helped more than any one else to the present renaissance of the English drama, speaks of Massinger as one who "not only had a clearer and a saner mind than they (i.e. the other Elizabethans), but more real ingenuity and truer sense of dramatic effect. If he had lived in Spain, he would have been a formidable rival of Lope and Calderon. If he had lived in France a hundred years ago, the elder Dumas and Victor Hugo would have to look to their laurels."[1] It is also worth remembering in this connection that Archer is none too leniently disposed towards the Elizabethans, and it is also interesting to note that at least for once he and Swinburne agree in respect of their estimation of Massinger as a dramatist.[2]

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[1] William Archer—*The Old Drama and the New*, p. 101

[2] A. C. Swinburne—*Contemporaries of Shakespeare*, p. 149.

It seems, however, that Lamb was not altogether without some perception of dramatic qualities. Of Chapman he says "dramatic imitation is not his talent. He could not go out of himself as Shakespeare could shift at pleasure to inform and animate other existences, but in himself he had an eye to perceive and a soul to embrace all forms and modes of being." Again, in one of his letters to Mrs. Shelley, he lamented his own lack of the constructive gift with reference to his *Poem-Broker's Daughter*. "The scenes come one after another like geese, not marshalled like cranes or a Hyde Park review. . . I want some Howard Payne to sketch a skeleton of artfully succeeding scenes through a whole play, as the courses are arranged in a cookery book, I to find the wit, passion, sentiment, character and the like trifles."[1] This reminds one of Scribe's saying a few years later, "When my subject is good, when my scenario is very clear very complete I might have the play written by my servant; he would be sustained by the situation—and the play would succeed."[2] Here he appears to go into the very heart of the technique of playmaking, yet he never suspects the want of this logic of construction in the old dramatists he so enthusiastically applauds.

His other most notable contribution to the dramatic criticism of his time is his essay—*On The Tragedies of Shakespeare*. Here he contends that they should not be staged. He complains that "instead of realising an idea, we have only materialised and brought down a fine vision to the standard of flesh and blood. We have let go a dream, in quest of an unattainable substance." Lamb here makes a general statement which has only a particular application. He confounded the nineteenth century

[1] Letter to Mrs. Shelley, July 27, 1827.

[2] Quoted by Brander Matthews in *A Study of the Drama*, p. 21.

method of representing Shakespeare with the art of the Elizabethan theatre. What Lamb means to say is that the stage-representation such as that he and his generation were made familiar with by Kemble and others, and which destroyed the spiritual significance and the symbolic value of the tragedies. It is true that it is the symbolic quality which makes the tragedies of Shakespeare so great and which the "literalism" of the nineteenth century theatre was destroying. Shakespeare himself has given the warning—"the best in this kind are but shadows, the worst no worse, if imagination amend them"[1]—which none who cares for theatrical effectiveness may ignore. "Art", says Oscar Wilde truly, "finds her own perfection within, and not outside herself. She is not to be judged by any external standard of semblance."[2] And this applies particularly well to all idealistic art, including the art of the idealistic theatre. The play, specially the highly imaginative play, is "the cloudy symbol of a high romance," and any effort to interpret it too literally, to reduce it to ordinary human terms, is sure to end disastrously. Shakespeare himself has pointed out the danger in a humorous way in *A Midsummer Night's Dream*. In the essay on *Stage Illusion* Lamb makes it clearer when he condemns real-life manners in comic acting, because "it will destroy the whimsical and purely dramatic existence of the character. They please by being done under the life, or beside it, not to the life."[3] It is universally admitted that Shakespeare cannot, without injury, be realistically treated in the theatre, and when Lamb advocated that Shakespearian tragedies should not be acted, he meant this and nothing more. It may not be out of place to mention here that Lamb had on his side apart from Hazlitt, no less a person than Goethe, who, like

[1] *A Midsummer Night's Dream*, Act V.

[2] Oscar Wilde—*Intentions* (Decay of Lying in Art).

[3] See Cambridge History of Literature, Vol. XI, p. 284.

him regarded Shakespeare more as a poet to be read than to be acted.[1] "Everyone feels mere mimicry is not acting," observes Tomlins, "yet some of our greatest actors have been and are obliged to piece out their conceptions of long and intricate characters, in those places where their imagination fails them, by substitution of close mimicries of bare realities."[2]

To sum up, Lamb, as a critic, cared above all for situation, for scenes of noble tension, for wit—the sudden verbal revelation whether creative or fanciful, throwing a curious remote light upon human nature. His criticism of the Elizabethan dramatists is thus lacking in system, and makes no difference between the purely poetic and the dramatic qualities. He confesses in his essay on *Imperfect Sympathies* that he is "merely suggestive" and "content with fragments and scattered pieces of Truth." By his superlative praise of the mere poetry of the dramatists he puts dramatic criticism on the wrong track but at the same time, it is probably true that he has been as much annoyed against as annoying. When he declared "let us write for antiquity," it is very doubtful whether he meant it be taken seriously. Besides, the elements of poetry and passion which he specially eulogised in the older dramatists were precisely the elements which the plays of his own time specially lacked, and it is not to be denied that these are the elements which give permanence to the drama in all ages.[3]

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[1] Maeterlinck is also said to have regretted that he had ever seen *Hamlet* on the stage. See A. Henderson—*Interpreters of Life and the Modern Spirit*, p. 122.

[2] P. G. Tomlins—*The Past and Present State of Dramatic Art and Literature*, p. 26.

[3] It is to be remembered in this connection that neither Lamb nor Hazlitt saw any real Shakespeare. Many of the versions acted in the nineteenth century were those of the

Coleridge as a critic occupies a higher position than Lamb as having definitely formulated the historical method in criticism "by conceiving poetry as a manifestation of the historic evolution of the divine spirit of the universe under the vesture of national, local, and personal conditions, inexhaustibly various"[1]. His mind was speculative, philosophical and profoundly analytic. He was the first critic to point out the fundamental difference between the classical and the romantic genius. "The Greeks idolised the finite," says he "and, therefore, were the masters of whatever is capable of being definitely conveyed by defined forms or thought: the moderns revere the infinite, and affect the indefinite as a vehicle of the infinite."[2]

As a dramatic critic, his most considerable contribution was his *Lectures on Shakespeare and some of the Old Poets and Dramatists*. His first course, including eighteen lectures, was given at the Royal Institution about 1802, and the London course of 1818 ended his career as a lecturer.

In his lecture *On the Drama generally and Public Taste*, he divides the dramatic poet's characteristics "into language, passion, and character." From this, one is led to think that these were all the qualities that he looked for in a good play. Evidently then, the author of *The Hamburg Dramaturgy*, with whom Coleridge had already come into contact, had not touched him on this side. He, like Lamb, failed to see that the dramatic structure was the vital thing

Restoration or the Garrick period. Besides, the spectacular tendency setting in strongly then, made the managers totally forget the wholesome principle that "the play is the thing". For a general history of the early nineteenth century stage, See Nicoll—*XIX Century Drama* Vol 1, and the present writer's *English Theatre of the Romantic Revival The Nineteenth Century & After*, Sept 1928.

[1] C. H. Herford—*The Age of Wordsworth*.

[2] Coleridge—*Essays and Lectures* (Everyman), p. 29.

in a drama. His *Lectures on Shakespeare* takes no account of the development of Shakespeare's technique as a playwright. On the contrary he is ready to prove upon first principles that all his works are perfect and could not have been different. Some of the observations on Shakespeare are no doubt profound, and have not been improved upon since his time. For instance, he speaks of the law of unity as the unity of feeling and character, and not the unity imposed by "factitious necessity of custom"—but something atmospheric and pervasive. He illustrates his point by reference to *Romeo and Juliet*. Coleridge's criticism, often like that of Lamb, is creative and impressionistic. He lets none of Shakespeare's poetry be lost.—"In Juliet love has all that is tender and melancholy in the nightingale, all that is voluptuous in the rose, with whatever is sweet in the freshness of spring; but it ends with a long deep sigh like that last breeze of the Italian evening."[1] Here again, we have Lamb's ecstasy, the same fervour of expression, the play of fancy

> "Slipping in between
> The beauty coming and the beauty gone."

Coleridge is more subtle than Lamb and had come into contact with Lessing, yet he, too, was unable to give the guidance the age needed. He does not seem to have realised that the art of the drama was specific and different from the art of poetry, and had to be learnt; that Shakespeare also learnt it by degrees, and in the theatre—its only school; that great as was the genius of Shakespeare, it did not mature in a day.

Possibly it is true that Coleridge felt the appeal of the truly dramatic. It is of interest to note what he says of Massinger, the one playwright of the Elizabethan age often

[1] Lectures. Possibly it is this sentimental vein that is ridiculed by Hardy in his *Anthemion*, Act II, Sc. 2. (Clatterbuck is perhaps Coleridge.)

Shakespeare, who was a dramatist first and a poet afterwards. "He excels," says Coleridge, "in narration, and for the most part displays his mere story with skill. But he is not a poet of high imagination; he is like a Flemish painter, in whose delineations objects appear as they do in nature, have the same force and truth, and produce the same effect upon the spectator. But Shakespeare is beyond this; he always by metaphors and figures involves in the thing considered a universe of past and possible experience; he mingles earth, sea and air, gives a soul to everything, and, at the same time, that he inspires human feelings, adds a dignity in his images to human nature itself."[1] The passage is significant as showing Coleridge's relative valuation of the poetic as distinguished from the dramatic qualities. Like Lamb, he does not set much store by drama that is not exalted by poetry—whether of passion or of character. So it is that both are of the same opinion in the matter of stage illusion—which is "a willing suspension of disbelief, a remission of judgment." The art they regarded as the highest, is, therefore, far removed from the art whose products are meant "to buzz in people's head" and remind men of members of their family. "For not only are we never deluded or anything like it," says Coleridge, "but the attempt to cause the highest delusion possible to bewilder in their senses sitting in a theatre, is a gross fault, incident only to low minds, which, feeling that they cannot affect the heart or head permanently, endeavour to call forth the momentary affections. There ought never to be more pain than is compatible with co-existing pleasure and to be amply repaid by thought."[2]

Coleridge's criticism takes no account of the art of play making. He studies characters unravels by analysis their deepest motives, argues back from their overt acts to the intricate mental processes involved, and sometimes altoge-

[1] *Essays and Lectures* (Everyman), p. 29. [2] Ibid., p. 29.

ther forgets that they are not living personages but dramatic characters. "He elicits," says Herford, "the hidden pathos of humour, and is somewhat too prone to find profound judgment in a pun."[1] He considers Shakespeare's works as romantic poetry revelling itself in the drama, and emphasises their morality.

Hazlitt is the third of the great triad of critics of this period. Early in his career he came into contact with Coleridge, for whom he had a profound regard. His mentality was entirely different from that of Coleridge. On the one hand, he was inferior to Lamb in creative power, and on the other, he lacked the organic sense of Coleridge. His lectures on the *Characters of Shakespeare's Plays* are isolated studies. He passes the plays in review one after another without attempting to elicit from them as Coleridge does, the history of the mind of the author behind them. "He exhibits rather than reveals beauties."[2] He enjoys the poetry of Shakespeare, interprets the characters but "brushes away all that is mysterious and problematic' in the plays.[3] That his interest is æsthetic rather than dramatic is perhaps best seen from his remarks on *The Comedy of Errors*. "This comedy,' says he, "is taken from *The Menæchmi* of Plautus, and is not an improvement on it.[4] Shakespeare appears to have bestowed no great pains on it, and there are a few passages which bear the decided stamp of his genius." To say that it is no improvement is to misunderstand the very nature and

[1] C. H. Herford—*The Age of Wordsworth*, p. 87.

[2] Op. cit., p. 77

[3] Op. cit., p. 77

[4] Professor Baker has pointed out at some length Shakespeare's improvements on Plautus and also his comprehension of the audience as revealed in the handling of the plot. See G. P. Baker—*The Development of Shakespeare as a Dramatist* pp. 155 ff.

quality of the play. It is a farce, pre-eminently relying on the adroitness of situation, and not on the humour or on the veracity of its character.[1] It is, no doubt, one of his comparatively early plays, yet it can be said without exaggeration that even in his later plays Shakespeare has not shown a greater capacity for a finer adjustment of the mechanism of the play to the needs of the theatre. That the spectators may get amusement out of the various mistaken identities which make up the plot, it is absolutely necessary that they should be told at the very beginning all about the two sets of twins, and how they were parted, so that the audience could follow and enjoy the puzzling complications that make up the plot. It was certainly no easy task to do all that without loss of effect. Shakespeare has done it with absolute certainty and perfect comprehension of the dramatic effect. The court-scene at the opening sets forth all that is necessary to be told, and a considerable economy is achieved by making the loss of the child the excuse for the violation of the law against strangers. The elements of busy trifling and display such as the nature of the scene allows, on the one hand, ensure the instant interest of the audience, while on the other, they strike, as is usual with Shakespeare, an "einleitende Akkord" (to quote Freytag's phrase) of the play which is a farce and raises laughter by automatism—by repetition, inversion, and *interference de séries*, and such other devices of a mechanical character. These points must not be lost sight of in judging the play, and, if Hazlitt had comprehended all these he would certainly not have brushed it aside as a piece of work carelessly done, because "it has few passages which bear the decided stamp of his (Shakespeare's) genius."

[1] For the difference between the appeal of true comedy and farce see Allardyce Nicoll—*An Introduction to Dramatic Theory*, pp. 132—4.

Again, commenting on Marlowe's *Edward II*, he says that "*Edward II* is drawn with historical truth, but without much dramatic effect. The management of the plot is feeble and desultory; little interest is excited in the various turns of fate; the characters are too worthless, have too little energy, their punishment is, in general, too well deserved to excite our commiseration; so that the play bears, on the whole, but a distant comparison with Shakespeare's *Richard II* in conduct and power or effect."[1] On the contrary, does not every reader feel that Marlowe shows truer theatrical instinct in *Edward II*, in successfully trying not to shift the interest midway on a secondary character, as Shakespeare does? Edward's opponent, Mortimer, is undoubtedly an unattractive character, Bolingbroke on the other hand, has elements of popularity, but he is so lightly sketched that he scarcely fastens on the audience. Thus the interest of the audience is fluttered away in Richard II.[2] As a contrast to this, it is certainly instructive to note how Shakespeare keeps the character of Banquo in the earlier part and that of Macduff in the later part subordinate to that of Macbeth. Even in the last stage of the tragedy of *Macbeth*, Macduff, in spite of obviously popular elements in his character, is never allowed to compete in interest with Macbeth and we all feel what has been gained thereby in concentrated dramatic effect.[3]

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[1] Hazlitt—*Lectures on Elizabethan Literature* (Bohn), p. 54.

[2] Compare Professor Nicoll's remarks on *Julius Cæsar British Drama*, p. 175.

[3] Shakespeare shows even better management of the falling action in *Othello*, *Coriolanus* may be regarded as the greatest example of sustained interest in the hero both in the rising as well as in the falling action. See *Modern Language Notes* Dec., 1922. A. H. Tolman—*The Structure of Shakespeare's Tragedies with special reference to Coriolanus.*

Besides, Hazlitt takes no notice of how Marlowe subordinates literal historical accuracy to the higher purposes of art, while substantially adhering to history. He compresses the Gaveston and Spenser episodes, historically separated by years, for the purpose of enhancing the human interest and the dramatic congruity of the play. As a drama thus we see *Richard II* is scarcely superior to *Edward II*. There cannot be any doubt that Hazlitt's preference for Shakespeare's play is determined by its richer poetry as also by his idolatrous veneration for Shakespeare.

In the contemporaries of Shakespeare, it is the literary qualities that appeal to him most strongly "The sweetness of Dekker, the thought of Marston, the gravity of Chapman, the grace of Fletcher and his young ey'd wit, Jonson's learned sock, the flowing vein of Middleton, Heywood's ease, the pathos of Webster, and Marlowe's deep designs, add a double lustre to the sweetness thought, gravity, grace, wit, artless nature, copiousness, ease, pathos and the sublime conceptions of Shakespeare's muse."[1] These are the qualities that he appreciates most in the Elizabethan writers, and not one of them can be said to be a dramatic quality, though their presence in a drama will always give it an added lustre. Commenting on *Mother Bombie* (of Lyly), he finds in it "little else than a tissue of absurd mistakes . . like another *Comedy of Errors*," but goes into ecstasy over *Endymion*—"Happy Endymion! Faithful Eumenides! Divine Cynthia! who would not wish to pass his life in such sleep, dreaming of some fair heavenly goddess, with the moon shining upon his face, and the trees growing silently over his head." None can mistake why he prefers this play to *Mother Bombie* after this rhapsody

To Hazlitt it was always sufficient, as Professor Howe observes that "here was poetry of high order, that here

[1] Hazlitt—*Lectures on Elizabethan Literature* (Bohn) pp. 10-11

was something that made him glad to be alive."[1] He admires the old dramatists because "there is nothing theatrical about them. In reading them, you only think how the persons into whose mouth certain sentiments are put, would have spoken or looked; to Dryden and others of that school, you only think as the authors themselves seem to have done how they would be ranted on the stage by some buskined hero or tragedy-queen."[2] He even goes further, and, like Lamb, holds that the contemporaries of Shakespeare have an advantage over him in the fact that their plays are not associated in our mind with any stage-trick.

As a critic of the theatre, however, he went to the other extreme in giving almost exclusive attention to the actor, forgetting that the real life of a play depends on its creator rather than on its interpreters,—and failed to realise that "a new image or new transposition of life in a form appropriate to the theatre is more important than the perfection of the human instrument by which it is made flesh."[3]

A brief notice of the less known writers who essayed dramatic criticism in this period will, I hope, be found useful even though many of them have vanished completely without leaving a rack behind. Among these Edward Stanley deserves mention by virtue of the special merit of his little known essay, *Thoughts on Tragedy* (1790) published along with his even less known closet-play, *Elmwah*. The essay has been undeservedly consigned to the limbo of the forgotten. His main object is to help in the revival of poetic tragedy, and he is chiefly concerned with the dramatic writers of his own time. Fortunately his was not a mind which revels in the sepulchral splendour of an irrevocable past.

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[1] C. R. L., Vol. XII, p. 170.

[2] Hazlitt—op. cit., p. 104.

[3] A. B. Walkely—*Pastiche and Prejudice. Essay on Acting and Criticism.*

"A good tragedy," says he, "ought to be a good poem; but since many of the pieces which are every day produced and which please the world, cannot be esteemed good poems, and yet are reputed good tragedies, it should follow, that to compose a tragedy poetical genius is not at present requisite And, indeed, if modern compositions of this nature were estimated by their poetic merit only, few could assert a just claim to excellence. . . It is therefore evident that the want of poetical genius, in this species of production, may be remedied, and no man should be discouraged from attempting this line, who, to a tolerable share of judgement, a slight knowledge of versification, and some skill in moving the passions, unites *a happy display of incident*"[1] The last part, which I have ventured to italicise, claims special attention as showing the author's comprehension of the theatre. There are some observations on plagiarism in course of which he points out the limits to which borrowing may be allowed, and a very just condemnation of those who "neglecting the thoughts of the ancients adopt their peculiarity of phrase." He shows his good sense again when, welcoming poetry in tragedy, he warns dramatic writers against the vicious habit of indulging in laboured hyperbole, antithesis, metaphor, and mere ornamental description at the expense of relevancy He refers particularly to three well-known plays of the eighteenth century, *viz.*, Edmund Smith's *Phædra and Hippolytus*, Addison's *Cato*, and Johnson's *Irene*, and plainly tells us that, abounding as they do in poetic qualities, they are not proper plays for the theatre. He rightly attributes the temporary success of *Cato* to the rival efforts of Whigs and Tories, and points out that all the three plays are deficient in incident.[2] While

[1] P 108.

[2] Sir Edmund Gosse writing in 1902 says the very same thing when he speaks of *Cato* as lacking in "dramatic business." See *The Revival of Poetic Drama* in *The Atlantic Monthly* Vol. 90, p. 159

thus recognising the importance of dramatic incidents in a play, he is shrewd enough to see that too much might easily be made of it. "In our time," says Stanley, incident has been improperly used, it has become the primary object of modern composition, when it ought to be result of plot, a secondary matter springing from natural causes. Incident should be the legitimate offspring, not the adopted child, of tragedy."[1]

As one reads this essay, one cannot help regretting that it was not more widely known to those who, after Stanley, came to write plays or pen dramatic criticism. He appears to have been on the right tack, a thing that cannot be said of the great critics of the succeeding years. Throughout his performance is characterised by sanity, acuteness, independence, sincerity, and a genuine perception of the relative value of the poetical and the dramatic qualities of plays. "Though much has been done in favour of tragedy," says he, "yet it has been injudiciously done . . . we have many examples of poetical merit without art, but we have many more instances of art without genius." Here he seems to anticipate in substance by more than a century what Professor Brander Matthews says about the technique of playmaking—"Construction, the adroit building up of a series of situations, this is the prime requisite of dramatic art, without which the art cannot exist; but it is only the beginning, and it can never be an end itself, as it was in the so-called well-made plays of Scribe and of the crowd of collaborators and disciples that encompast Scribe about."[2]

Stanley concludes this ably written essay with an appeal to poets to recognise the claims of art—the art of playmaking. "Poetry, and business, passion and incident," says he, "even in a moderate degree combined, must

[1] Stanley, pp. 121 122.
[2] *The Principles of Playmaking*, p. 84.

give satisfaction. On the stage and in the closet, mankind might be equally pleased, and the giddy multitude and the judicious few would at length unite their suffrages in favour of so happy an assemblage."[1] Thus he seems to foreshadow the trend of modern critical thought on drama in his genuine solicitude for the reconcilement of the art of poetry and the art of playmaking, which alone he thinks and rightly, too, can enable the stage to recapture poetry as its natural expression and revive again the lost glories of "the spacious times" of Queen Elizabeth.

Brief notice may be taken here of the critical matter in the prefaces to the plays of Joanna Baillie. She appears to have come under the influence of Richardson. Her professed preference for faithfully delineated nature to embellishments of poetry are negatived in her practice in dramatic writing in which she employs a richly padded style recalling that of Ford.

Sir Walter Scott as a critic belongs to the Lamb school. This is seen from his extravagant eulogy of Baillie's plays whom he hailed as a reincarnation of Shakespeare in petticoat.[2]

Outside the Lamb group Bishop Hurd published *A Dissertation on the Province of the Drama* in 1911. He says nothing that is not to be found in Aristotle. His reference to the contemporary drama is brief and becomes ineffectual through too much brevity. "Our writers" says Hurd, "are all for plot and intrigue, and never appear so well-satisfied with themselves as when, to speak their own phrase, they contrive to have a good deal of business on their hands." At the same time, he gives a salutary warning to those writers who, recognising the superiority of the

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[1] Stanley, op. cit., p. 141.

[2] See Scott's *Marmion*, Introduction to Canto III.

plays of character to plays of intrigue have been led into the other extreme of not paying any heed to the plot at all. But Hurd does not point out the plays or the authors, nor does he say anything particularly about the tragedies of his time.

George Darley would claim notice as one of the very few critics who directed their attention to the contemporary playwrights. His *Letters to the Dramatists of the day*,[1] six in number and written with the object of originating "a nascent impulse to legitimate dramatism" would probably have been more helpful had they been less hypercritical and truculent, but as it is, they did little more than earn for him the appellation of bloody John Lacy—that being the name under which he wrote those *Letters*. He is specially interested in tragedy, and points out that its virtue does not consist in its "poeticity" and observes that "action is the essence of drama", and that "the one great instrument to keep an audience on the fret of attention is a good plot."[2] While he is right so far, his bias, for Elizabethan technique leads him to countenance noise, bluster and fury. He condemns *Sardanapalus* for the absence "of horror, ruin, tumult and confusion" and exclaims melodramatically—"write me a good, honest, spirit-stirring, ear piercing, homely English tragedy such as will go near to burst me a blood vessel."[3] He betrays this partiality for action of a purely physical character in his own plays. He seems not to have realised what Dryden had done a century and half ago that there can be action of a properly dramatic nature without the characters coming to blows on the stage, much less does he seem to have suspected that the main drift of drama—and particularly of tragedy—through its whole history, has been towards greater and greater "inwardness," towards a setting of unconscious

[1] *London Magazine*, Vol VIII. [2] Ibid., p. 8
[3] Ibid., p. 136

impulses, of "thoughts hardly to be packed into a narrow act," of feelings that rarely ripple into action. His Elizabethan taste is even more pronouncedly felt in his attacks on the style of Proctor and Byron, whose blank verse he calls "prose-poetry" and vehemently denounces it as "an enervate, Sybarite system of versification, and ridicules Byron as bestriding "a broken-back'd Pegasus," scarcely realising that this kind of blank-verse was more suitable to be spoken on the stage than the richly embroidered and high-flying style of the latter-day Elizabethans. Besides, his attempt is journalistic, desultory and perhaps, even half-hearted. He makes no reference to Shelley's *Cenci*, though it had been published quite three years before, while he devotes pages to criticise such a little known play as *Darnan* by James Haynes.

Darley's views were criticised by Martin M'Dermot, latterly editor of *The European Magazine*. His *Philosophical Enquiry into the Source of the Pleasure derived from Tragic Representation* (1824) of 405 octavo pages is an ambitious work. By far the greater part of the book deals with various theories regarding the sources of tragic effect and their moral and metaphysical values. In the last chapter he tackles "the secret of giving dramatic interest to tragedies intended for representation." In reply to Darley he says that modern tragedies are not wanting in action, and observes that the cause of their insipidity lies in the absence of strong sensations, emotions, and passions.[1] This, however, seems hardly true, because most of the nineteenth century tragedies, if anything at all, are hyper-emotional and hyper passionate. He also, like Darley, accuses the dramatic writers of trusting to the virtue and efficacy of language. He is certainly right in considering the actors as important factor in the success of tragedy on the stage.

[1] Pp. 341-344.

It will be easily seen from the above that these critics touch only the fringe of the principles of dramaturgy, and in none can we trace any attempt at a scientific study of the dramatic principles and practices such as Lessing's or much less like those of our own times.

Following Lamb, Coleridge, Hazlitt, there were others of their school who gave occasional attention to Shakespeare, and less often to the minor Elizabethans, but rarely they paid any attention to their contemporaries. They appear to live entirely in the past and their criticism is aesthetic rather than dramatic.[1] The tradition they set up persisted almost throughout the century. The tendency of this school is to judge a play by some isolated passages embedded in an otherwise not too unexceptionable play. They forget that a play is an organic structure and critics can hardly peep and botanise on the *disjecta membra* of scenes and passages and yet valuate them correctly.

To sum up then, the English critics failed to do what Lessing had done for Germany by *The Hamburg Dramaturgy*. They did not take into account the relation between the theatre and the drama. This was, perhaps, due to their acquaintance with nearly all the Elizabethan playwrights who were thought of as models, in the closet.[2] Character, diction, situation are what appeals to us most when we read a play. These, of course, are qualities that give it permanence; but there are far other qualities called for in an acting play. A mere melodrama with sensational incidents and complicated intrigues is more likely to hold the audience than a highly literary play devoid of stage qualities. The critics of the Romantic Revival, at any rate those whose influence was abiding, failed to realise this

[1] Eg., Leigh Hunt and De Quincey and Landor.

[2] Note also Gosse's remarks on *The Duchess of Malfi* in the essay quoted above. See f. n. on p. 10, also Nicoll Smith—*Shakespeare in the 18th Century* (Oxford).

fact. Had they paid more attention to the contemporary plays than to the players, as they actually did, they would in all likelihood have found this out. It may, perhaps, be true that the condition of the stage and the utter worthlessness of the bulk of the stage-pieces, led them to emphasise the permanent qualities. Whatever the reason, they cannot escape the blame of having failed to realise that "a great drama regarded as a piece of literature depends for its greatness on something far other than mere plot, a play to be successful on the stage (unless it be a show . . .) demands a plot well-knit, intriguing full of interest, and artistically conceived. The point of view of the theatre and the point of view of the study, therefore, not only do not coalesce, but are poles asunder,[1] so much so that a popular dramatist of the late Victorian era who is still alive and active, says "how many a sound and stirring play has held the audience firmly in its grip until down comes a chunk of "literature" like brickbat . . . . Away goes the play, away go the players, and we see nothing but a dismal library and an old professor, in blue spectacles with a wet towel round his head."[2]

U C. NAG

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[1] Allardyce Nicoll—*An Introduction to Dramatic Theory*, p. 34.

[2] Sidney Grundy quoted by C. E. Montague: *Essays and Studies*, Vol. 2, *The Literary Play*. Also compare Grundy's *The Play of the Future* which was an attack on John Palmer's *The Future of the Theatre*.

HAMLET AND OPHELIA

A PSYCHOLOGICAL STUDY OF THEIR RELATION

The most popular of English plays, like the personality of its author, has been a subject of endless discussion. Baffled in their attempts to pluck out the heart of its mystery, critics have often read their own thoughts in the words of Shakespeare. No other play has caused more perplexity and discussion in the whole range of art, with the consequence that the artist's purpose is obscured by the intrusion of the critich personality and his egoistical humours. The majestic simplicity of the play, its subtle and complex revelation of human nature have been turned into enigmatical problems for our intellects to play upon. We are simply bewildered by the volume of criticism, often fantastic and contradictory, which has been piled upon a single play of Shakespeare. And yet this vast literature of criticism which has grown round *Hamlet*, irrespective of its interpretative value, is not only of absorbing interest, but has a deep significance from the psychological point of view. While its force of suggestion can never be overestimated, its varied interpretation of life is only next to the craft of the poet. It shows an amazing power of imagination and often attains the best form and reaches a very high literary level.

The appeal of this great classic is universal, and the most unmistakable sign of its greatness is the force of its appeal in a variety of circumstances and in changing times. The popularity of the play, which has never depended upon contemporary taste alone, and cannot be degraded to the level of a thing of fashion, is bound to grow with time. With the advance of modern civilisation, and the imaginative

bent of mind which the progressive world increasingly induces in thoughtful people, *Hamlet* is likely to acquire a deeper significance and intensify its forceful appeal. The more imaginative among us have undoubtedly a smack of Hamlet and we become well aware of his presence, when the deeper problems of life perplex us, and we are anxious to discover the significance of our relation with the inscrutable ways of destiny and the world. We may not be called upon to face the external circumstances which it was Hamlet's lot to contend against, yet the same questionings, doubts and problems confront us, and they induce in us the states of mind which, if not identical with, are similar to those of Hamlet.

It is not surprising, therefore, that *Hamlet* continues to fascinate our minds and critical interpretations go on increasing the volume of literature on the play. They may not always throw light on the mind of Shakespeare, but they often illuminate our path in the world, and open new vistas into that wonderful region—the human mind.

We naturally judge a play by the distinct and immediate impression it makes upon us, either when we see it on the stage, or read it with an alert mind. The impression is the play, but no two persons can receive similar or equally vivid impressions. The similarity of taste may produce a general agreement regarding the main qualities of the play, yet there is a difference, and it is due to the difference in the keenness of imaginative apprehension and emotional response. These give a distinctive and individual quality to our appreciation of a work of art. And these are exactly what we expect to be clearly brought out in a literary or aesthetic criticism, the quality of which will largely depend upon the vividness with which the imaginative experiences are realized. Even if the critic fails to attain accuracy of interpretation, his appreciation has, at least, the *truth* of suggestion, and if he is not quite fantastic, he may convey a point of view which

the reader perhaps had only imperfectly realized. The clouds of incense may darken the idol, but the offering springs from an adoring heart

The love affair of Hamlet and Ophelia is the strangest love story ever written. Shakespeare has allowed us only glimpses of unspoken thoughts, yet this minor theme cannot be treated merely as an episode. It traces the history of two loving souls drawn together, only to be separated for ever in the most tragic circumstances. The course of love ends unhappily, and for this as we find, the blame lies more on the lovers, their mistakes and psychological complexes than on the unpropitious external circumstances. The lovers are drawn irresistibly to their doom on account of their own weaknesses and incapacity to grasp the reality of the situation Our tragic feeling deepens when we discover that the cruel circumstances were not entirely beyond control, and that with a little more of mutual sympathy and insight, at least the course of love, true as it was, could be made to run smoothly, whether the lovers survived or not is a different question

Let us take Hamlet first. Of all the characters given to us by Shakespeare, and more specially of those in whom imagination is predominant, Hamlet is the most closely studied and intensely realized But there is such a bewildering diversity of opinion that perhaps the only point of unanimity is that Hamlet was a man! Some critics maintain such a radical difference in their conceptions of this character that we despair of constructing a personality of a type known to us from experience. We are, however, not concerned with those traits in the character which have given rise to controversies, and on which the last word will perhaps be never written. Let us leave out of account the big issues concerning Hamlet's real or feigned madness, his irresolution or weakness of will, due to excess of intellect, the underlying causes of delay in carrying

out his resolve, and similar other problems, which usually engage the attention of critics. Our main purpose here is to understand Hamlet in love, and for that it is quite enough to remember some of the broad features of the character about which there is no sharp difference of opinion. Hamlet is a prince, and a prince every inch of him. His one supreme desire is to do the right thing and do it like a gentleman in a thoroughly honourable manner. He is a truly heroic and honourable pattern of manhood, and it is his high endeavour to keep that manhood unsullied by any ignoble deeds and designs. His ideals are noble and generous impulses sway his heart. At times he becomes impulsive and even then the highest motives lead him to action. His bent of mind is intellectual and philosophical and he is an indweller of his own soul, marked with a strong idealistic tendency. He is wise in thought but without actual experience of the problems of the world

Hamlet is quite happy at the University of Wittenberg. He may be moody at times but there is no cause to ruffle his peace of mind. Suddenly he is called home, as King Hamlet, his father, is dead While he is overwhelmed with grief his mother gives him another terrible shock by marrying Claudius with almost indecent haste

> 'Ere yet the salt of most unrighteous tears
> Had left the flushing in her galled eyes,
> She married'

Hamlet begins to lose interest in the world and finds its uses weary, stale, flat and unprofitable Not only that but he loses faith in womankind also and with an anguished soul exclaims

> "Frailty, thy name is woman !"

Then, at Elsinore he feels quite out of his element. The life at the court, to say the least, is wholly disgusting to him

and he longs to go back to Wittenberg. But there is only one person who has attracted him by her simplicity, innocence and matchless beauty, and that is Ophelia. In the rotten state of Denmark she alone is his sanctuary, and in making love to her he passes some happy hours in these days of sorrow and dismay.

If Hamlet could be prevailed upon by his mother and Claudius to stay at Elsinore, perhaps his growing love for Ophelia would have chased away his gloomy thoughts and revived his interest in all the good things of life. We do not believe in the words of Polonius that Lord Hamlet was a prince out of her star. The royal assent for marriage could be secured as a matter of course when Gertrude liked the match. She expressed her joy when Hamlet's madness was attributed to Ophelia. Addressing her she says —

> "I do wish
> That your good beauties be the happy cause
> Of Hamlet's wildness."

After her death she says again :—

> "I hoped thou shouldst have been my Hamlet's wife."

So the words of Polonius mean nothing serious but mock humility in the presence of royalty. But such a happy consummation was not destined to happen. The ghost appears to Hamlet and completely changes him from that moment and his whole life is upturned. He is changed within and without and is now quite a different man from what we have so far known him to be. His susceptibilities are quickened and he has to bend all his energies and intelligence to discover the guilt of the usurper and do the bidding of the ghost. He has resolved 'to put an antic disposition on' as a first step to achieve his object, that is, to set right the time that is out of joint.

All this naturally affects his relation with Ophelia. He has already made 'many tenders of his affection' to her and she has gladly accepted his presents as well as vows of love, and there is no reason to suppose that Hamlet does not know the responsive and warm feelings of Ophelia. Just as he has received some consolation from Ophelia and her love, Hamlet naturally expects that with his growing perplexities, he will get sympathy and understanding in an increasing measure from the same quarter. He has a right to expect this if the two souls are already united by the bond of true and honourable love. Perhaps the time has not yet come to confide the cause of his distraction to the little sweet girl. Hamlet wants to know unmistakably what place Ophelia would occupy in his future schemes. The most oppressive thought in his mind is about the frailty of women. Will Ophelia prove steadfast and true in her love or will she set upon it the same value as Gertrude has done? Will she be found trustworthy and able to bear the weight and burden of mystery? The first visit of Hamlet to Ophelia after he has interviewed the Ghost, is marked by a strange behaviour and the girl is alarmed. Some critics maintain that it was the first occasion when he feigned madness and proclaimed it through Ophelia. This may be so, but it has a greater significance from our point of view. Ophelia is on her trial and Hamlet impatiently wants to know how he stands in relation to her: whether his continued attentions to her would prove a hindrance and interruption to the great task or she could, directly or indirectly, prove herself a ministering angel. But Hamlet, unfortunately, is not aware of the fact that Laertes has already poisoned her mind by words of cautious wisdom and Polonius commanded her sternly saying:—

> 'I would not, in plain terms, from this time forth,
> Have you so slander any moment's leisure,

> As to give words or talk with the Lord Hamlet.
> Look to't I charge you; come your ways.'

Hamlet does not take much time to realise the situation. The interview described by Ophelia in all its details to her father is full of meaning, though no words are spoken between the lovers. It is the most eloquent expression of love on the part of Hamlet without his uttering a single word. Ophelia says :—

> 'He falls to such a perusal of my face
> As he would draw it.'

With one long piercing glance he has found out the secret of Ophelia's heart. He cannot rely upon her love. For Hamlet love must have now some meaning and significance which he had not imagined so far. And Ophelia is too simple to understand it. On the other hand the doubts raised in her mind by Laertes and Polonius are confirmed by the strangeness of Hamlet's behaviour. Let Polonius feel satisfied that he has discovered the cause of Hamlet's madness and fasten his belief on Ophelia too, but it is beyond his power of comprehension to realise what the unhappy interview really signified.

Now Hamlet's mind is completely absorbed in his own difficulties and he does not think of love. There is no direct expression of regret for the smothered love and we feel inclined to believe, that he feels some relief in getting rid of an inopportune and interrupting passion. When the mind is wholly taken up with tragic issues, when it is bordering on a great sorrow, it cannot be a congenial soil for love, which can either grow or stagnate and die.

Now Hamlet does not care to meet Ophelia. When once she is thrown in his way by her designing father, Hamlet is bitter and there is scorn in every word he utters. He is deliberately harsh, because he is convinced that Ophelia is playing in the hands of her father. Everyone is fooling

him to the top of his bent, everyone frets him, though Hamlet sees through his motives and cannot be played upon by the wisest of the court. Ophelia is no exception, and this breaks his heart and we find justification for his rudeness towards her.

She desires, more correctly, is desired by her father,—to return the presents of Hamlet, because the giver proves 'unkind.' She little knows that his bitterness is due to the treatment he has received from her. He says, 'I never gave you aught,' and in sheer resentment asks her, 'Are you honest?' That she is not. And then he tells her plainly that he loved her once.

She is bewildered and cannot ascribe the cause of this sudden change in Hamlet to her own behaviour towards him. He grows wild and with a fling at woman, who make monsters of men, insistently asks her to go to a nunnery instead of breeding sinners.

Hamlet and Ophelia have now been driven apart and the last chance of mutual understanding is gone for ever, when Hamlet kills Polonius mistaking him for the king. But his love for Ophelia has not completely dried up. He realises that she is playing in the hands of her father. The stream of love is only lost in the sandy desert to well up again, but, alas too late to be fruitful in this life.

As to the case of Hamlet, most extraordinary opinions have been held of Ophelia's character. From some critics she receives a very high praise, while others altogether condemn her. Shakespeare has drawn her character only by a few master strokes, and she herself says very little, and all that she says is usually to hide her emotions. In the play she does not fill a large place, but in the mind of the reader, she dwells like the fragrance of a sweet flower and seems to permeate the whole story. She is the soul of innocence and gentleness, and her presence radiates

everywhere virtue and peace. She hardly seems to be a creature of this world where innocence like hers is seldom found.

Ophelia is motherless and has been unfortunately deprived of feminine influence almost from birth. Her brother is usually absent from home and she has been brought up under the sole influence of the old father Polonius loves her as an affectionate father, but he forgets that she is no more a child. Many a father commits the same mistake and never fully understands the aspirations of a growing mind. She also looks upon him as a wise and faultless old man. Her regard for him amounts to adoration, and her one duty is to obey him. Filial affection and filial duty for her are like the laws of nature, and the habit of submission to parental command becomes a part of her nature. But the religious earnestness with which she obeys her father proves harmful to her in more than one way Her mind is dwarfed, the growth of her personality is arrested. Her will is paralysed and she is deprived of her power of independent judgment. Her mind does not grow with age because the opportunities of its growth that is the experiences of life, are denied to her The father is wisely jealous of her honour and has successfully kept her away from the corrupt influences of the degraded court. But Ophelia has to pay heavily for the excessive restraint and cramped atmosphere in which she has been brought up. Polonius commands her feelings, regulates her sentiments and never allows her to judge things for herself Her innocence is not the conscious avoidance of evil but almost a complete ignorance of the ugly side of things in life. Wickedness and cruelty in man would shock her as something unnatural Her virtues are therefore of a passive character Rebecca Sharp, in *Vanity Fair*, says that she had never been a girl and that she had been a woman since she was

ought. In contrast with her, Ophelia, though of age, remains an eternal child because her father always treated her as such.

Some of the pronounced traits in the characters of Hamlet and Ophelia may usefully be contrasted, but here only a few are noticed. Hamlet is imaginative and oppressed by melancholy thought, Ophelia is all simplicity and innocence. Hamlet is sceptical and asks inconvenient questions of life and the world, Ophelia has no such promptings because her reason is not reflective but instinctive. Hamlet is oppressed by the discord in the world and the tumult in his soul, Ophelia remains ignorant of her doom like a little lamb led for sacrifice to the altar. Hamlet has been likened to an oak planted in a beautiful vase, more appropriately Ophelia may be compared to a small flower of a delicate plant, which has been tended with loving care in a drawing room and has been protected against all violent changes of climate and even sunshine. Once exposed it withers in no time.

It is not given to human beings to love and be wise. Ophelia's mistake is that unconsciously she conceals her emotion. Her beauty and innocence, so rarely found together at the court, have attracted Hamlet and he has made many tenders of his affection to her. He has importuned her with love in honourable fashion and with holy vows of heaven has given countenance to his professions of love. She is gratified with Hamlet's sincerity and true affection, though she never says so. As a matter of fact she never expresses her own feelings and we can only infer how deeply she has gone in love. Elaine does not know the name of love, and yet her feeling is strong enough to prompt her to action, and she goes out to nurse the wounded Lancelot, Ophelia too has the feeling but it is so sup-

pressed that it fails to manifest itself effectively even in words. If she had remained cold and unmoved by Hamlet's affection, the rupture would not be so pathetic. It would be a mistake to suppose that Hamlet failed to awaken love in her or impart the warmth of his own feeling. She loves but does not know her own mind, and much less does she know the responsibilities which love lays upon her. With bashful reluctance she has confessed Hamlet's love for her, but unconsciously she is allowing us a glimpse in her own heart, and we find that in the depths of her heart she loves more than she is loved.

The tragedy of her love lies in the fact that she has not realised her own responsibility towards Hamlet. Love without confidence is a mockery, and Ophelia has not learnt this precious lesson. Love entails sacrifices and no true lover can ever be satisfied if he is loved less than a father. Ophelia has no right to betray Hamlet to her father. Filial affection cannot stand against the true love of man and woman. Laertes, a chip of the old block, has admonished Ophelia in the accents of Polonius, to hold Hamlet's affection 'as a toy in blood', and the old father wants the whole truth from her. 'You speak like a green girl,' says he and in love matters advises her to 'think yourself a baby'. He has treated her as a baby and already she looks upon herself as one, never trusting her own judgment. When Polonius commands her no more to receive the addresses of Hamlet, she meekly promises—'I shall obey, my lord.' These innocent words seal their doom and prove a bane to both Hamlet and Ophelia. A little touch of Desdemona in her would have entirely changed the course of their love.

When they meet again and Hamlet's behaviour frightens her, she fails to say a word of consolation to Hamlet, and forgets the simple duty of a woman. She should have told him in confidence that her brother and

father do not permit her to receive the prince. This is the simple demand of true hearts to awaken sympathy. The only reason for the remissness is that Ophelia's obedience to her father is an obsession and the feeling of love is not allowed to assert its legitimate right

When she is prompted to return Hamlet's gifts, he says, 'I never gave you aught.' The innocent girl fails to understand these words She has not prized what Hamlet has given her and has not rendered the same in return. Love, unless expressed in the language of lovers, creates misunderstandings, and Ophelia never realizes this common experience. When Hamlet says 'I loved you once,' Ophelia should have started a lover's dispute and created a scene; but she meekly, though painfully, says, 'you made me believe so.' This is self-suppression which hides love almost completely from view.

Hamlet's remarks are biting, when he discovers that Ophelia is affected, lying and willingly serves as a decoy. He abhors nothing more than insincerity and false appearances. And a guileless girl is allowing her innocence to be outraged, is prompted to tell lies and make a tool of herself against her own lover! To Hamlet this is inexcusable and the poor little doll does not know her own offence, because her father is Polonius. Hamlet's only sanctuary of love and refuge of faith is profaned and desecrated

Believing him to be 'blasted with ecstasy' she prays to heavenly powers to restore him It does not strike her that more than heaven she herself has the power to restore him, if not for the world, at least for herself Hamlet is not mad for Horatio, and if she wills he can be a sane man for her too But there is no prompting from within and no realization of the situation by Ophelia. She believes herself to be the cause of Hamlet's madness and yet has not a word of sympathy which may soothe his distrayed

heart. When Hamlet leaves Ophelia she practically cries over him and is full of pity and love for him—'Oh what a noble mind is here o'erthrown!' But why not all this in the presence and hearing of Hamlet? The lines that follow are beautifully pathetic and leave us in no doubt about the depth of love Ophelia has for Hamlet. It is clear that the strain is too great for her nerves to bear and madness may result if the tension is not relieved. She is naturally 'most deject and wretched, that suck'd the honey of his music vows'. Thus Ophelia shares the responsibility of blasting Hamlet's happiness as well as her own. She feels for his madness, and pities him, but there is no *true sympathy* for him, as sympathy requires understanding and this is what she woefully lacks. Only if she could see just beneath the surface, try to understand the sarcastic remarks of Hamlet, her own love for him would have prevented any breach from widening into a gulf. And yet we cannot blame Ophelia for all that she fails to do and all that she undertakes at the bidding of her father. Polonius is largely responsible for what Ophelia is. If we once visualise the part of Polonius in shaping her character we begin to pity her all the more. The murder of her father, and that too at the hands of her lover, completely upsets her mind and she becomes quite insane. Her habitual silence changes into raving music and empty talk. Her stifled heart becomes voluble only when she becomes insane. Her insanity is complete and ends with her death. There are few scenes more pathetic than the insanity of Ophelia and her death by drowning.

Hamlet partly atones for his harshness and indifference towards Ophelia by jumping in to her grave and fighting Laertes for claiming to love her more than himself.

> "I loved Ophelia, forty thousand brothers
> Could not, with all their quantity of love,
> Make up my sum."

We believe it, and sympathise with Hamlet for the unhappy course of his love for the departed lady.

Hamlet expected a little too much from her before her love was fully awakened, and failed to win her heart completely; and she, on her part, was slow to realize that filial duty was not the supreme duty, once love entered her heart. The catastrophe was inevitable and lovers themselves, perhaps, did not know, as we do, how deeply and sincerely they loved each other. Timid but true love feared to transcend certain limitations and came to grief.

Hamlet has to play for high stakes and has to risk his life, if necessary, to accomplish his purpose, but poor Ophelia is like a lily mown down with weeds, and we are left to question the ways of inexorable fate. Ophelia, the martyr of innocence, is the sweetest flower of Shakespeare's fancy.

J. S. VAJÑIK.

THE POETRY OF WORDSWORTH

"Time may restore us in his course
Goethe's sage mind and Byron's force,
But where will Europe's latter hour
Again find Wordsworth's healing power?"

—Matthew Arnold, *Memorial Verses.*

It is worth while at the very outset to observe that the poetry of Wordsworth was of the nature of a deliberate protest, a protest against the thin pale sentiment, the frigid conceits, and the gorgeous, inane phraseology of the Augustan poets. It was an attempt to do away with that conventionalism which beset the poetry of the Classical Period in English Literature. At first, it was received with a storm of ridicule, because it ran counter to the popular tastes. Men had been wont to appreciate the fine-moulded couplets and the stinging epigrams of Pope; they had been accustomed to relish the formal and pompous ways of city-bred aristocrats, they had been habituated to applaud the mere external, decorative, and architectonic aspects of poetry; but Wordsworth disappointed them in all these respects; for he was not a purveyor to established tastes but a shaping and compelling force, a pure and powerful light thrown on the dark places of changeful human experience. When, however, people grew surfeited with the glittering wit, the ingenious fancy, and the gaudy diction of poets of the Eighteenth Century, there arose, upon the heels of this satiety, an eager craving in the hearts of men for a living voice and a natural tone, which were given them in abundance by Wordsworth, around whom, therefore, there gathered now a world of admirers, so zealous in their devotion that

they even sought to vindicate the obvious faults of their Master

The language which Wordsworth chose as a medium to pour forth his soul is amazingly simple, so much so, indeed, that some critics have even gone to the length of calling it bald or barren Well, we acknowledge that his expression is frequently so plain, so naked, and so austere that it may be regarded as a little bald, but then, as Matthew Arnold rightly observes, "it is bald as the bare mountain tops are bald, with a baldness which is full of grandeur"[1] This simplicity of diction was, in fact, a deliberate design with Wordsworth, not that he could not command a florid and embellished style in which poetry is usually dressed, for in his Ode on Immortality and his most Virgilian poem, *Laodamia*, as well as elsewhere in several scattered places, he has furnished ample proof of the fact that he was capable of wielding the most magnificent language that Poesy ever employed in her service. Indeed, Wordsworth's chief distinction was that he had an equal command over two distinct modes of expression: the aristocratic manner of English poetry and the democratic manner of plain, inornate diction. As a rule, he uses a severely simple form of expression; but, at times, in spite of himself as it were, his ideas are couched in a style which is as resonant in cadence and as splendid in phrasing as anything in the English grand manner We should bear in mind, however, that for Wordsworth poetry was not a gay coquette whose purpose is merely to flirt awhile with her suitors and then jilt them in the long run with scorn, but

> "A perfect Woman, nobly planned,
> To warn, to comfort, and command."

[1] See page 159 of *Essays in Criticism, Second Series* Macmillan, 1918.

"To console the afflicted, to add sunshine to daylight by making the happy happier, to teach the young and the gracious of every age to see, to think, and feel, and therefore to become more actively and securely virtuous"[1]—this is his own account of the purpose of his poetry. Wordsworth held with Cowley that "Truth is truest poesy." And with Bacon he maintained that "No pleasure is comparable to the standing upon the vantage-ground of truth." Of course, the chief end of poetry is pleasure; but, then, there are so many different roads that lead to this Rome; and Wordsworth chose for his career as a poet the secure Highway of Truth. But Truth is Beauty; and Beauty, he was convinced, does not stand in need of any poetical embellishment or ornament, but is, when unadorned, adorned the most. It is here that we touch the inner secret of that surprising simplicity which marks the poetic diction of Wordsworth, and the world, it should seem, is immeasurably fortunate in that. For, if he had adopted a highly-coloured, tesselated, and recondite mode of utterance, few could have approached his lofty message, dealing as he was for the most part with that transcendental world which had swum into his ken through his quiet contemplation of Nature.

One of the aims of Wordsworth was to reform the poetic diction of his day, and to bring about the accomplishment of this desired end he recommended the language of common life for poetical purposes. He did not, of course, succeed in substituting the language of common life for poetic diction, but he did a much better thing. He emancipated it from that unnatural pomp and circumstance which had long corrupted it; he set it coursing along the normal channels of thought and speech; he made it more intimate

[1] See Wordsworth's *Letter to Lady Beaumont*, dated Coleorton, May 21, 1807.

and nerved it with the elements of strength and dignity, purity and truth, united with subtle thought and tender sensibility "He dug deep into the ore of manly thoughts, and finding there a corresponding tongue both new and true, he blew away the dry dust of conventionalities and affectations, and replaced a false poetic diction by its genuine one."[1] Personifications of abstract ideas, to which Pope and his followers resorted as a mechanical and habitual contrivance to elevate their style, are rarely met with in his poetry they are used only when they are prompted by passion. All gross and violent stimulants are religiously avoided, all extraordinary incidents and outrageous sentiments are scrupulously eschewed, all vulgar emotions and voluptuous sensations are rigidly excluded. He looks steadily at his subject; consequently, his poems are absolutely free from falsehood of description they are, indeed, the very emanations of reality and truth. It is the feeling therein developed which gives importance to the action and situation, and not the action and situation to the feeling Poetry is for Wordsworth not a mere matter of amusement and idle pleasure it is, like love, a passion, it is, like religion, a protection against the pressure of trivial employments and a consolation for the afflictions of life, it is like a morning star which throws its radiance through the gloom and shadow of death He agrees with Aristotle that Poetry is the most philosophic of all writing, and adds that it is so, because "its object is truth, not individual and local, but general and operative, not standing upon external testimony, but carried alive into the heart by passion, truth which is its own testimony, which gives competence and confidence to the tribunal to which

[1] Aubrey de Vere on Wordsworth, quoted by A. J George in page 11 of his Introduction to *Wordsworth's Prefaces and Essays on Poetry* published in Heath's English Classics Series, 1892

it appeals, and receives them from the same tribunal."[1] Poetry is for him "the image of man and nature." It is "the breath and finer spirit of all knowledge; it is the impassioned expression which is in the countenance of all Science." "Poetry," he says "is the first and last of all knowledge—it is as immortal as the heart of man." It is on account of this sublime conception of poetry that Wordsworth never breaks in upon the truth and sanctity of his pictures by transitory and accidental ornaments, that he never endeavours to excite admiration of himself by arts, the necessity of which must manifestly depend upon the assumed meanness of his subject. Wordsworth is "a dedicated spirit." He is a sublime teacher, a serene prophet who is ever conscious of his high mission and who holds himself in sacred responsibility for its fulfilment. He says himself:—"I wish either to be considered as a teacher or as nothing at all."[2] It is in consequence of this attitude on the part of Wordsworth that his poetry is pre-eminently characterised by didacticism. No phenomenon is touched but is moralised upon withal. The woodland linnet and the throstle are not only sweet songsters who delight our senses with their dulcet music, but also sublime preachers who elevate the soul with their splendid sermons. Taking a retrospective glance of the river Duddon and finding it still flowing as it did in days gone by, Wordsworth, who has been justly called "the Moralist," writes beautifully thus:

> "Still glides the Stream, and shall for ever glide;
> The Form remains, the Function never dies
> While we, the brave, the mighty, and the wise,
> We Men, who in our morn of youth defied

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[1] See page 15 of *Wordsworth's Prefaces and Essays on Poetry*, edited by A. J. George in *Heath's English Classics Series*, 1892.

[2] See *Wordsworth's Letter to Sir George Beaumont*.

The elements, must vanish ;—be it so !
Enough, it something from our hands have power
To live, and act, and serve the future hour,
And if, as toward the silent tomb we go,
Through love, through hope, and faith's transcendent dower,
We feel that we are greater than we know."

It is for such weighty utterances of moral truth that we so much value to-day the poetry of Wordsworth. But what is even more important than this is the fact that, like all the best teachers of the world, Wordsworth climbs beyond teaching to the plane of art. He does not inculcate any dogma which is at best only a new error, he communicates a spirit which is a perpetual possession. It is himself and what is best in himself, that he communicates. That is why "every one," as Stevenson says, "has been influenced by Wordsworth. A certain innocence, a rugged austerity of joy, a sight of the stars, 'the silence that is in the lonely hills,' something of the cold thrill of dawn, clung to his work and give it a particular address to what is best in us. You need not agree with any one of his beliefs; and yet the spell is cast."[1] While, on the one hand, he is the poet of unpoetical natures, of minds possessed of quiet and contemplative tastes, on the other, he is in a certain real sense the poets' poet, singing, as he does, of "the light that never was on sea or land."

The poetry of Wordsworth has an almost magical power of soothing the mind that is agitated by the fever and the fret of the world. Mill's testimony to this effect is recorded in his *Autobiography*. He writes, "from them (Wordsworth's poems) I seemed to learn what would be the perennial sources of happiness, when all the greater evils of life shall have been removed. And I felt myself at

[1] See page 9 of *Selected Essays of R. L. Stevenson*, edited by H. G. Rawlinson. Oxford University Press, 1925.

once better and happier as I came under their influence."[1] William Watson also in *Wordsworth's Grave*, one of his greatest critical elegies, adds his verdict thus:

> "Rest! 'twas the gift he gave, and peace! the shade
> He spread, for spirits fevered with the sun."

In his *Memorial Verses* Matthew Arnold also speaks of "Wordsworth's healing power." These illustrious witnesses will, it is hoped, convince everyone of the assuaging power of Wordsworth's poetry, but if there be some non-believers still left, let them drink deep at the poet's own Pierian spring and watch the effect on themselves. This aspect of his poetry is, in fact, acknowledged even by his hostile critics. Judging from a superficial view, however, they attribute it to a supposed coldness of disposition on the part of our poet. They forget that all his feelings and affections were fearfully strong, so much so, indeed, that if his intellect had been less powerful, they must have shattered him long before the actual date of his demise. The characteristic calm of Wordsworth's poetry, then, is not the result of any want of passion on his part, it is, on the contrary, paradoxical though it may sound, the very culmination of emotion. His poetry is like the potter's wheel which, though apparently quiet and motionless, is nevertheless rotating, in reality, with the utmost possible speed. It is impassioned.

> Impassioned? ay, to the song's ecstatic core!
> But far removed from clangour, storm, and feud,
> For plenteous health was his, exceeding store
> Of joy, and an impassioned quietude.
>
> —William Watson. *Wordsworth's Grave.*

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[1] See page 148 of *Autobiography* by John Stuart Mill, Third Edition. Longmans, Green, Reader, and Dyer. London, 1874.

It is this impassioned quietude which distinguishes Wordsworth from all other poets in English literature. It is the outcome partly of his peculiar method of composition and partly also of that spirit of harmony which he had been able to evolve in his own inner life. His poetry is, of course, the spontaneous overflow of powerful feeling, as all genuine poetry must needs be, but it is not the expression of feeling that is immediate, but of one that is regained in composure. It is, in his own words, "emotion recollected in tranquillity." Moreover, all his faculties worked together in perfect harmony. A beautiful passage from Prof. Dowden is in point and worth quoting: "All diverse energies blended in Wordsworth's nature into a harmonious whole. The senses were informed by the soul and became spiritual, passion was conjoined with reason and with conscience, knowledge was vivified by emotion, a calm passivity was united with a creative energy, peace and excitation were harmonised, and over all brooded the imagination. The state which results from such consentaneous action of diverse faculties is one not of pure passion, not of pure thought: it is one of impassioned contemplation."[1]

The poetry of Wordsworth stands unique in respect of the fact that it is an expression, a direct, simple, and unsophisticated expression, of an original conception of Nature. Nature was for Wordsworth not a lifeless, though beautiful, sum of things where poets and artists might go to make an inventory of her charms, but an organic whole, vitalised by an all-pervading Soul which is the same in Man and Nature.

> "To her fair works did Nature link
> The human soul that through me ran."

[1] See page 56 of Dowden's *Studies in Literature* (1789–1877). Eleventh Edition. Kegan Paul. London

Nature, thus conceived, becomes as susceptible to pain and pleasure as any the most sensitive creature among human beings.

> "Through primrose tufts, in that sweet bower,
> The periwinkle trailed its wreaths
> And 'tis my faith that every flower
> Enjoys the air it breathes!
>
> "The budding twigs spread out their fan
> To catch the breezy air;
> And I must think, do all I can,
> That there was pleasure there."

Not only is Nature regarded as fully sentient but also as possessed of a moral life, and capable, therefore, of teaching the highest and the truest wisdom to man.

> "Books! 'tis a dull and sudden strife;
> Come, hear the woodland linnet,
> How sweet his music! on my life,
> There's more of wisdom in it.
>
> One impulse from a vernal wood
> May teach you more of man,
> Of moral evil and of good,
> Than all the sages can."

Though an ardent admirer of Wordsworth, Morley is content to regard these verses as the outcome of the poet's fun, "a half playful sally for the benefit of some too bookish friend." He forgets that Wordsworth was of all English poets, the least given to fun. The idea expressed in these stanzas is not the offspring of any half-playful mood; it is an embodiment of the very soul of Wordsworth, which he is never tired of repeating. The *Prelude* and the *Excursion* are very largely commentaries on this text.

Wordsworth is the supreme mystic of Nature in English poetry. He did not, like the pagans of old,

divide it into independent anthropomorphic deities, a Proteus rising from the sea here and a Triton blowing his wreathed horn there he recognised nature as an organic whole, in which an almighty and eternal Being resided. It was not the beauty of Nature which brought him joy and peace, but the *life* in Nature. He himself had caught a vision of that life; he knew it and felt it, and it transformed the whole of existence for him

"And I have felt
A presence that disturbs me with the joy
Of elevated thoughts a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean, and the living air,
And the blue sky, and in the mind of man
A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things."

Wordsworth's poems on Nature are, in brief, to be regarded not simply as graceful descriptive pieces they constitute a revealing agency, like Love or Prayer, that opens to the comprehending mind new vistas of insight into the heart of things And it is assuredly the recognition of this revelation and awe about them which makes a critic like De Quincey speak of the homely poet of Rydal in the following high strain:

"The very image of Wordsworth, as I prefigured it to my own planet-struck eye, crushed my faculties as before Elijah or St. Paul" [1]

Wordsworth, then, is admittedly "the sovereign poet of Nature", but he is even more the poet of Man. It is at his hands that

[1] See page 125 of De Quincey's *Recollections of the Lakes and the Lake Poets*, edited by Adam and Charles Black Edinburgh

> "A Maid whom there were none to praise
> And very few to love,"

receives the simplest, finest, and briefest elegy written in the English language. The Waggoner, the Leech-gatherer, the Idiot Boy, the Solitary reaper, and the poor Highland girl, who would have excited nothing but scorn in the heart of any other poet except perhaps Gray and Burns, are by Wordsworth not only sympathised with but also loved and championed, so that Keble in his Latin Oration rightly remarks that "he has shed a celestial light upon the affections, the occupations, the piety of the poor." Prof. Stopford A. Brooke also writes to the same effect: "He is the foremost singer of those who threw around the lives of homely men and women the glory and sweetness of song."[1] Wordsworth had, in fact, a reverence for human beings as such. He writes himself:

> "And thus my heart was early introduced
> To an unconscious love and reverence
> Of human nature; hence the human form
> To me became an index of delight,
> Of grace and honour, power and worthiness."

This is why there runs through his poetry a deep strain of human interest which at times becomes so powerful that it threatens to throw into the shade even his impassioned love of nature.

We have hitherto been dealing with the merits of Wordsworth's poetry, and it need hardly be said that we have in so doing made reference only to some of his most important qualities as poet; considerations of space forbidding us to dwell upon those points which he has in common with many others of his craft. We have made, for instance, hardly any mention of his love of liberty, his hatred of base materialism, his profound spirit of humility,

[1] See page 155 of *English Literature*, by Stopford A. Brooke, in the *Literature Primers* series, edited by J. R. Green, Macmillan, 1879.

his natural piety of soul and purity of inspiration, his contempt for conventional custom and yet his about wish to throw off "unshackled freedom" and live a bondman in the light of Love and Truth These qualities, however, are too conspicuous to call for any specific emphasis at our hands. There remains now the rather unpleasant task of mentioning the drawbacks of Wordsworth We shall hasten through this part of our work as rapidly as we may, though we cannot totally ignore it; for the criticism of a poet, that omits all reference to his failures, is as futile a thing as the biography of a soldier, that passes in silence over his defeats.

A rapid survey of the poetry of Wordsworth will bring home to the reader's mind a sense of the amazing inequality of his work. There are vast regions of stiff and barren soil. He is at times frightfully prosaic. What Myers says about the *Excursion* holds good in the case of his other long poems as well He writes: "Its form is cumbrous in the extreme, and large tracts of it have little claim to the name of poetry"[1] It is important here to realise that Wordsworth was essentially a lyric poet. When he sang out, therefore, his thought or emotion in a brief idyllic verse, he was at his best, but when, imitating the "invincible knights of old," he laboured at sustained and arduous tasks, he really went against his grain and proved a failure Wordsworth is habitually fond of lingering upon his own thoughts and feelings. That is why most of his poetry is disfigured by an excess of subjectivity The *Prelude* is one big rock of egotism, and so are his other long poems also "Tendency to a lengthy insistence on his own feelings and ideas is the worst charge that can be brought against him,"[2] says Myers. His poetry is entirely

[1] [2] See pages 90 and 56 respectively of Myers' admirable book on Wordsworth in the *English Men of Letters Series* Pocket Edition Macmillan, 1908.

lacking in humour. Here and there you come across a wearisome iteration and sermonizing commonplace. He is at times pompous, oppressive, and tedious. His conceptions of human nature is singularly narrow. He was "retired as a noontide dew" and did not possess "Shakespeare's boundless, cloudless human view." His sympathy is with the mild song of the stock-dove and not with the fiercer passions of the nightingale. The romance of the human heart lay completely hidden from his view. He was not a dramatic poet, and he did not explore the darkest recesses of the soul. His absolute perversity in the matter of dramatic art and insight is amply evinced in his tragic play, *The Borderers*. But enough of this unpleasant task of finding faults.

> "Not ours to gauge the more or less,
> The will's defect, the blood's excess,
> The earthly humours that oppress
> The radiant mind
> His greatness, not his littleness,
> Concerns mankind."

Whatever the drawbacks of Wordsworth his greatness as a poet can never be questioned. "I simply believe," says Matthew Arnold, "that the poetical performance of Wordsworth is after that of Shakespeare and Milton, of which all the world now recognises the worth, undoubtedly the most considerable in our language from the Elizabethan age to the present time."[1] He is one of the greatest sonnet-writers in English poetry. He revived the sonnet from the disuse into which it had fallen after Milton turned to other modes of writing, and by his modifications of rhyme and form he permanently enlarged its scope. He used it far more freely and for more varied purposes than

[1] See page 132 of M. Arnold's *Essays in Criticism*, Second Series. Macmillan, 1918.

did any other poet in English literature. Besides innumerable single sonnets of the first rank, he wrote some well-known sonnet-sequences, such, for example, as *Sonnets to Liberty*, *To the River Duddon*, *Personal Talk*, and *The Ecclesiastical Sonnets*. Indeed, he is credited to have written no less than seven hundred sonnets, many of which are not only among the glories of Wordsworth, they are among the glories of English poetry. He shares with Milton the power of investing his sonnets with the essential characteristic of dignity. He introduced also a new element into the sonnet, the element of meditative tenderness, of natural mysticism. The peculiar note of Milton's genius was vastness, the sonnet did not afford him room enough. But Wordsworth had little of Milton's gigantic loftiness, his spacious freedom of poetic energy, and, therefore, to him, as he himself confesses,

> "'Twas pastime to be bound
> Within the sonnet's scanty plot of ground."

Between the mind of Wordsworth and the genius of the sonnet there was, indeed, an almost absolute harmony. The sonnet requires a reflective habit of thought, a transparent clarity of expression, a discipline, not an abnegation or abandonment, of emotion. It requires

> "Such a tide as moving seems asleep,
> Too full for sound and foam,
> When that which drew from out the boundless deep
> Turns again home."

And these were exactly the peculiar features of Wordsworth's genius. It is this singular and complete adjustment of worker and implement which makes Wordsworth "a greater master of the sonnet than Milton, the greatest on the whole that England has known."[1]

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[1] See page 137 of John Bailey's excellent book on Milton in the *Home University Library* series.

The poetry of Wordsworth is to day and will be for ever a fount of pure wisdom, a synthesis of the religion of the philosopher with that of the churchman, and a help to the cause of virtue and truth. Byron's poetry is strife and force, Keats's an embodiment of sensuous beauty, Shelley's the radiant flush of the rose on peaks divine; but the poetry of Wordsworth is a panacea, an ambrosial drink which heals all ailments of life. Keats is the poet of sensation, Byron the poet of passion, Shelley the poet of imagination, but Wordsworth is the poet of brooding contemplation. Byron never loses his firm foothold upon the earth, Shelley always soars aloft in the thin region of azure skies, and seldom comes near enough to our tangible world; but Wordsworth is invariably, like his own skylark,

"True to the kindred points of heaven and home."

Keats is the poet of Beauty, Wordsworth is the poet of Duty, "Stern Daughter of the Voice of God." Shelley is the poet of Liberty, Wordsworth is the poet of Law, of divine Law that preserves the stars from wrong and keeps the most ancient heavens fresh and strong. Coleridge was a dreamer and a wizard; Wordsworth a moralist and a visionary who won a mystic insight into the heart of things. He had the unique faculty of idealising familiar things. He evokes a profound sense of the infinite out of common life. His emphasis is everywhere thrown upon those spiritual forces within us which give us power over ourselves and the ability to lift ourselves above the reach of circumstance and the flux of external things. He is the poet of Memory, mother of the Muses. He is the poet of Joy,

"Of joy in widest commonalty spread."

He is the poet of Sympathy,

"The primal sympathy
Which having been must ever be."

He is the poet of Faith, "the faith that looks through death." Over his poetry there hangs the splendour of a mountain sun-set. It is instinct with harmony, deep and eternal like the undying baritone of the sea. It is permeated with a spirit of reflection, which is generous, large, tolerant, and pantheistic in tone. Wordsworth is one of the greatest poets of childhood, not the childhood that is

"Mewling and puking in the nurse's arms,"

but one which,

"Trailing clouds of glory doth come
From God who is our home."

By virtue of his glorious and manifold achievement he occupies a unique position in the brotherhood of the world's poets, of whom he himself writes

"Blessings be with them, and eternal praise,
Who gave us nobler loves, and nobler cares
The Poets, who on earth have made us heirs
Of truth and pure delight by heavenly lays."

B. L. SAHNEY

हमारे साहित्योदय की प्राचीन कथा

किसी जाति या देश का साहित्य उस जाति या देश के महात्माओं की भावनाओं, विचारों और कल्पनाओं का एक लिखित भंडार है, जो उस जाति या देश के जन्म से आरम्भ होकर निरंतर बढ़ता जाता है और जब तक उस जाति या देश का अस्तित्व इस भूतल पर वर्तमान रहेगा सदा बढ़ता जायगा। यों तो संसार में साहित्य की सृष्टि उसी दिन से आरम्भ हो गई है जिस दिन से मनुष्य इतर जगत् सृष्टि से उच्च होकर अनुभव करने और सोचने विचारने लगा है। पर उसकी वास्तविक उन्नति उस समय से आरम्भ होती है जब से उसमें अपने भावों, विचारों और कल्पनाओं को अपने सहवासियों पर प्रकट करने की तथा उनके भावों, विचारों और कल्पनाओं को स्वयं जानने की प्रवृत्ति उत्पन्न हुई।

साहित्य का मानव-जीवन से बड़ा घनिष्ठ संबंध है। साहित्य में किसी जाति के जीवन का स्पष्ट चित्र देख पड़ता है। साहित्य उसके अभ्युत्थान और पतन, उसकी सांसारिक चेष्टाएँ, उसकी स्वाधीनता, उसकी दासता, उसकी उच्छृंखलता, उसके विचारों या भावों की दृढ़ता तथा उसके सामाजिक, राजनीतिक और धार्मिक जीवन का साक्षात् स्पष्ट प्रतिबिंब है। साहित्य की बात तो दूर रही, उसकी भाषा के एक एक शब्द में उसका इतिहास भरा पड़ा है। अतएव मानव-जीवन और साहित्य-जीवन में अन्योन्याश्रय संबंध है। एक के बिना दूसरे का विवेचन ठीक ठीक नहीं हो सकता। इस विचार से साहित्य निर्माणक और निर्मित दोनों है। जहाँ एक ओर वह अपने प्रभाव से परिस्थिति के परिवर्तन करने में समर्थ होता है, वहाँ वह प्रायः वर्तमान परिस्थिति में पड़कर स्वयं उसके साँचे में ढल जाता है। साहित्य के अधिकांश भाग को निर्मित होने का ही सौभाग्य प्राप्त होता है। निर्माणक होने का सौभाग्य तो 'क्वचित्' की श्रेणी में गिनने योग्य है। इस अवस्था में किसी जाति के साहित्यिक विकास के तथ्य का समझने के लिये यह आवश्यक नहीं है कि उसकी परंपरागत

स्थितियों का विवरण जान लिया जाय, वरन यह भी आवश्यक है कि उसके जीवन के भिन्न भिन्न कालों की सामाजिक, राजनीतिक और धार्मिक स्थितियों का भी विवेचन किया जाय, जिससे दोनों की तुलना करके सत्य की बात समझ में आसके।

भाषा और साहित्य का संबंध भी बड़ा घनिष्ठ है। यद्यपि दोनों का विकास अपनी अपनी स्वतंत्र परिस्थिति के अनुकूल होता है, पर दोनों एक दूसरे के परम सहायक और घनिष्ठ मित्र हैं। जैसा कि हम कह चुके हैं साहित्य भावों, विचारों और कल्पनाओं का भांडार है और भाषा उन भावों, विचारों और कल्पनाओं के प्रकट करने का एक-मात्र सुलभ साधन है। जिस प्रकार भावव्यक्ति के बिना भाषा का विकास नहीं हो सकता वैसे ही भाषा के बिना साहित्य का आविर्भाव असंभव है, यदि भाषा के न रहते हुए भाव, विचार और कल्पनाएं उदय होतीं तो उनके प्रकट करने के साधन के अभाव में वे अपने जन्मस्थान में लीन हो जातीं और भाव संसार को उनके संचित भांडार को रक्षित रखने की कौन कहे, उसके सूत्रपात करने का भी सुयोग न उपस्थित होता। इस अवस्था में साहित्य के लिए भाषा कितनी उपयोगी है यह बताने की आवश्यकता नहीं है। पर भाषा का विकास एक प्रकार से होता है और साहित्य का दूसरे ढंग पर। भाषाओं के रूपात्मक विकास में और साहित्य के विकास में कोई समानता नहीं है, पर उनके भावात्मक विकास में और साहित्य के विकास में कई बातों में समानता है। ऐतिहासिक तथा भौगोलिक स्थिति और जातीय प्रवृत्तियों के कारण किसी भाषा में भावों का लोप या उदय होता है, और साहित्य के मूल आधार भाव ही हैं। इसलिये ऐसी स्थितियां और प्रवृत्तियां साहित्य पर भी प्रभाव डालती और उसमें परिवर्तन करती हैं। भिन्न भिन्न जातियों के परस्पर संसर्ग से या भिन्न भिन्न भौगोलिक स्थितियों में पड़ जाने से अथवा उत्पातक के वशीभूत हो जाने से किसी जाति के जीवन में या किसी देश की स्थिति में ऐसे परिवर्तन हो जाते हैं जो उसके रूप को बदल देते हैं। इन परिवर्तनों की प्रतिच्छाया साहित्य में संरक्षित रहती है। समय पड़ने पर वही साहित्य उसका सच्चा, स्पष्ट और साक्षात् चित्र उपस्थित करता है।

यह बात प्रायः सर्वसम्मत है कि प्राचीन भारतीय आर्य योरप और एशिया को आधुनिक सीमा के आस पास के मैदानों में रहते थे। वहाँ से वे नवीन जातियों के आगमन, जलवायु में परिवर्तन, वर्षा के अभाव, जनवृद्धि अथवा गृह-कलह के कारण हिंदूकुश और अफगानिस्तान के मार्ग से भारतवर्ष में आए और पंजाब में बस गए। इससे यह अभिप्राय नहीं है कि वे एक-दम बढ़ते हुए चले आए थे और सीधे आकर पंजाब के मैदानों में बस गए थे। उन्हें अपने पूर्व निवासस्थान से चलकर पंजाब में बसने तक कई शताब्दियाँ लग गई थीं। साल दो में कई टोलियों में इस देश में आए थे और क्रमशः उत्तर भारत में चारों ओर फैल गए थे। वहाँ के आदिम-निवासी द्रविड़ जाति के थे जिन्हें उन्होंने दक्षिण की ओर खदेड़ दिया या अथवा दस्युओं के निकट पीछे से अपने आधीन सगठन का एक अंग बना लिया था। कुछ लोग यह समझते हैं कि आर्य लोग सब भारतवर्ष में आए थे तब वे बिल्कुल असभ्य और जंगली थे। यह विचार सर्वथा अयथार्थ है। आर्य लोग एक बलिष्ठ, बलिष्ठ, गौरवर्ण, दीर्घकाय और सभ्य जाति के लोग थे। उनका जीवन उस समय की स्थिति के अनुसार सुव्यवस्थित, सुसभ्य और समुन्नत था। वे अपने साथ ऋग्वेद की ऋचाओं का भंडार लेते आए थे, जो उनके उन्नत विचारों, परिष्कृत भावों, सुव्यवस्थित जीवन और प्रकृति की उपासना का द्योतक है। जिस समय वे अपने पूर्व निवास-स्थान से चले थे उस समय संसार की इस प्राचीनतम साहित्यिक रचना की समाप्ति नहीं हो चुकी थी। इसमें निरंतर नई रचनाएँ जोड़ी जाती थीं और यह कार्य कई शताब्दियों तक निरंतर चलता रहा। अंत में महर्षि वेदव्यास ने समस्त ऋचाओं का संग्रह कर उन्हें यथास्थान लगाया और सम्पादन कर उनको सुव्यवस्थित रूप दिया। संसार की साहित्यिक रचना का आदि ग्रंथ इस समय यही ऋग्वेद-संहिता है। इससे पुराना ग्रंथ अभी तक कोई नहीं मिला है। अतएव भारतीय आर्यों को ही साहित्य के इस प्राचीनतम ग्रंथ को संरक्षित रखने का गौरव प्राप्त है। यह हमारी अत्यंत मूल्यवान् और आदरणीय सम्पत्ति है, जो हमारी प्राचीनता की ही सूचक नहीं है, वरन् हमारी सभ्यता, हमारी आध्यात्मिकता, हमारी साहित्यिकता और हमारी

सामाजिकता तथा संगठन-शक्ति का भी द्योतक है। इसी ऋग्वेद से हमारे आर्य-साहित्य का आरंभ होता है। इस वैदिक काल का सोचा आरंभ से लेकर विकास के कोई २०० वर्ष ईसवी पूर्व तक माना है। तिलक महोदय ने गणितज्योतिष के आधार पर गणना करके यह सिद्ध किया है कि आर्यों की सभ्यता के सार्वजनिक रूप का समय ईसा के ८००० पूर्व से ५००० पूर्व तक है। इस काल में वेदों की ऋचाएँ अपने परिमार्जित रूप में नहीं संकलित हो सकी थीं। संभवतः ये संहिता तथा और संहिता पद में थीं, जिनमें अथवा देवताओं के गानों, उपाधियों और यज्ञ कर्मों का वर्णन रहता था। इस काल का नाम तिलक महोदय ने 'अदिति' काल रखा है। इसके अनन्तर मृगशिरा-काल आता है, जिसका विस्तार ५००० ई० पू० से ३००० ई० पू० तक है। यह आर्य-सभ्यता का सबसे सुंदर काल है। ऋग्वेद के बहुत से सूक्तों की रचना इसी काल में हुई थी और इसी काल के अंतिम भाग से आधुनिक यूनानी और ईरानी लोगों के पूर्व पुरुष अपने आदिम स्थान से भिन्न भिन्न दिशाओं में गए थे। इससे यह सिद्धांत निकलता है कि ३००० ई० पू० तक आर्य लोग भारतवर्ष में नहीं आए थे। संभवतः वे इस काल में काबुल तक पहुँच गए थे। तीसरा काल को महाशय तिलक ने कृत्तिका-काल कहा है जो ३००० ई० पू० से १४०० ई० पू० तक था। इसी काल में तैत्तिरीय-संहिता और कई ब्राह्मण-ग्रंथों की रचना हुई थी। इस काल के आरंभ में ही ऋग्वेद की ऋचाओं का अर्थ साधारणतः नहीं समझा जाता था और उनकी व्याख्या प्राचीन साहित्य से होने लग गई थी। संभवतः इसी कृत्तिका-काल में संहिताओं का सम्पादन करके उनका क्रम लगाया गया और प्राचीनतम ऋचाओं और मंत्रों का अर्थ निश्चित करने का आयोजन किया गया। प्राचीन संस्कृत साहित्य का चौथा अयन कवित्व काल १४०० ई० पू० से ५०० ई० पू० तक था। इस काल में सूक्तों तथा उपनिषदों की रचना हुई। प्रोफेसर मेकडानेल का मत है कि वैदिक काल १५०० ई० पू० से २०० ई० पू० तक था। भिन्न भिन्न विद्वानों ने इस संबंध में भिन्न भिन्न प्रकार से विचार किया है। पर सब वैदिक काल को १५०० ई० पू० के इधर का नहीं मानते। महाशय तिलक के

३००० ई० पू० का समय माना है जिसे साधारणतः ठीक समझना चाहिए।

संस्कृत-साहित्य को मुख्य भागों या कालों में विभक्त किया जा सकता है—एक वैदिक काल और दूसरा परिमार्जित या संस्कृत-काल।

प्रथम काल का आरंभ उस समय से होता है जब आर्य लोग पंचनद देश अथवा प्राचीन काल के सप्तसिंधु देश में बस गए थे और उन्होंने अपने वेदों का संकलन और संपादन करके उन्हें सुव्यवस्थित रूप दिया था। इस काल की विशेषता कल्पना का विकास और पद्य का आविर्भाव था। इन आर्य ऋषियों ने इस प्राचीन काल में अपनी मानसिक सृष्टि की अद्भुत उन्नति की थी और यह देखकर आश्चर्य होता है कि उन दिनों में भी उनके विचार ऐसे उन्नत, सूक्ष्म, मौलिक तथा गम्भीर थे। उनके प्रवाहित विचारों के सौष्ठव आवश्यकता में कौशल और भाषा तथा छन्दोबद्ध-रचना में नैपुण्य ने उन्हें मानव-जगत् का कुतूहल बनाया है, संसार की किसी जाति को उनके इस चातुर्य की स्पर्धा करने तक का साहस नहीं हुआ। उन्होंने आडम्बरशून्य धार्मिक तथा दार्शनिक तत्त्वों का अनुशीलन कर साक्षात्कृतधर्मा की उपाधि प्राप्त की है। इस वैदिक काल के साहित्य को हम तीन उपभागों में विभाजित कर सकते हैं। पहला उपविभाग चारों वेदों की रचना से संबंध रखता है। इन चारों वेदों में सबसे प्राचीन और महत्त्वपूर्ण ऋग्वेद-संहिता है जो १० मंडलों में विभक्त है और जिसमें सब मिला कर १०२८ ऋचाएं हैं। इन ऋचाओं में भिन्न भिन्न देवताओं, विशेष कर इन्द्र, अग्नि और सोम का वर्णन तथा उनके प्रति प्रार्थनाएं हैं। ऐसा जान पड़ता है कि अद्भुत प्राकृतिक पदार्थों और घटनाओं का इन प्राचीन ऋषियों पर बड़ा प्रभाव पड़ा है। इन्हीं को आदर्शरूप मानकर इन्होंने अद्भुत सी ऋचाओं की रचना की थी। डाक्टर मैक्डानेल का कथन है कि "कुछ थोड़े से देवताओं को छोड़कर जो प्राचीनतर काल के हैं, शेष सब देवताओं की स्थिति प्राकृतिक नींव पर अवलम्बित है—जैसे सूर्य, ऊषा, अग्नि, वायु, पर्जन्य आदि। जिन ऋचाओं के आधार पर यह आर्य लिखा गया है वे चाहे प्राकृतिक घटनाओं की द्योतक हों, चाहे उनमें कोई दार्शनिक भाव अन्तर्निहित हो,

इसमें सन्देह नहीं है कि ऋग्वेद की ऋचाओं की रचनाएँ उत्तम कोटि की हैं, उनमें भाव और भाषा दोनों का सौष्ठव वर्तमान है। दूसरा सामवेद है। इसमें ७५ ऋचाओं और मन्त्रों को छोड़कर शेष सब अंश ऋग्वेद से लिया गया है। इस सामवेद के संकलन का उद्देश्य यही जान पड़ता है कि सोमयाग तथा अन्य क्रियाओं के समय गाये जाने योग्य ऋचाओं का संग्रह एक स्थान में कर लिया जाय। यजुर्वेद में भिन्न भिन्न धार्मिक क्रियाओं के उपयुक्त ऋचाओं का संग्रह है। इसमें विशेषता यह है कि ऋग्वेद की ऋचाओं के अतिरिक्त बहुत सा अंश गद्य में लिखा है, इन्हीं तीनों वेदों के समुदाय को त्रयी या वेदत्रयी भी कहते हैं। चौथा अथर्ववेद है जो सबसे पीछे का है और जिसमें विशेषकर मन्त्रों तथा धार्मिक विधानों का संग्रह है। इसकी भाषा तथा इसके विषय का विवेचन करके यह सिद्ध किया गया है कि यह अन्य तीनों वेदों से बहुत पीछे का बना है।

इन चारों वेदों की रचना के अनन्तर वैदिक काल के साहित्य की उत्पादक क्रिया की समाप्ति होती है। अब न नए मन्त्रों और ऋचाओं की रचना होती थी और न आगे उनकी आवश्यकता ही थी। सब इन प्राचीन ऋषियों की संतानों ने धार्मिक विधानों की ओर ध्यान देना आरंभ किया। अतएव अब इस बात की आवश्यकता हुई कि प्राचीन मन्त्रों और ऋचाओं का धार्मिक विधानों से सम्बन्ध स्थापित किया जाय और उनके सांकेतिक भावों को स्पष्ट किया जाय। इस उद्देश्य से प्रत्येक वेद के ब्राह्मणों की रचना आरंभ हुई। ये सब गद्य में लिखे गए हैं, पर इनकी लेखनशैली में आरंभ काल की वह मधुरता, स्वच्छन्दता और सुन्दरता नहीं है। वेदों और ब्राह्मणों में मुख्य अन्तर यह है कि वेदों की भाषा काव्यमय और व्यापक है, पर ब्राह्मणों की भाषा काव्यगुण-हीन और गद्य-मय है। पहले में स्वाभाविक और मोहक भावों का, तो दूसरे में बनावटी और अगोचर भावों का बाहुल्य है, एक में देवताओं की अद्भुत और स्वाभाविक कल्पना का आनन्द है तो दूसरे में धार्मिक विधानों और क्रियाओं की विशेषता है। ऋग्वेद के ब्राह्मणों में होता के कर्तव्यों का, सामवेद में उद्गाता के और यजुर्वेद में अध्वर्यु के कर्तव्यों का वर्णन है। इन्हीं ब्राह्मणों के अन्तर्गत आगे चलकर आरण्यक हुए, जिनमें दार्शनिक विषयों

पर विचार किया गया। पीछे से विशेषकर अथर्ववेद के आधार पर आरण्यकों से उपनिषदों की रचना हुई। ये उपनिषद् दो भागों में विभक्त किए जा सकते हैं—एक तो वे जिनका संबंध किसी संप्रदाय या देवता विशेष से नहीं है, जिनमें केवल परमात्मा का चिंतन किया गया है और जो मुक्तिलाभ के साधनों पर विचार करते हैं। दूसरे वे जो संप्रदाय विशेष से संबंध रखते हैं।

अब वैदिक साहित्य के तीसरे उपविभाग का समय आता है। आरंभ में या केवल वेदों को 'श्रुति' का नाम दिया गया था, क्योंकि केवल इन्हीं का ज्ञान पहले पहल सुनकर हुआ था। संसार की सब बातों के ज्ञान के विषय में दो सिद्धांत माने जाते हैं—एक विकास-सिद्धांत और दूसरा श्रुति-सिद्धांत। विकास-सिद्धांत के अनुसार सब बातों का आरंभ किसी साधारण बात से होता है और क्रमशः उन्नति होती रहती है, साथ ही संकुलता और जटिलता आती जाती है। श्रुति-सिद्धांत में जो कुछ हमें ज्ञात हुआ है वह ईश्वर की दया का फल है, उसने हमें कृपापूर्वक उसे उपहारस्वरूप दिया है, अथवा उसकी अनुकंपा से वह स्वयं आविर्भूत हुआ है। सारांश यह कि विकास-सिद्धांत में क्रमशः उन्नति होती है और श्रुति-सिद्धांत के अनुसार मनुष्य आरंभ में ही ज्ञान संपन्न हो गया था। संसार में जितने धार्मिक संप्रदाय हैं सब श्रुति-सिद्धांत के माननेवाले हैं, विकास-सिद्धांत को कोई नहीं मानता। इसी प्रकार वेदों का आविर्भाव भी ईश्वर की दया का फल है, अर्थात् प्राचीन ऋषियों ने इन्हें स्वयं ही सुनकर इनको कंठस्थ कर लिया है। इसी लिये ये 'श्रुति' कहलाते हैं। पीछे के ग्रंथ 'श्रुति' के अंतर्गत न होकर 'स्मृति' के अंतर्गत माने जाते हैं। पहले तो सारे वेद 'श्रुति' में गिने जाते थे, पीछे से पीछे वेद भी उसी में गिना जाने लगा। तब ब्राह्मणों के लिये झगड़ा उपस्थित हुआ और अंत में आरण्यकों तक को यह पदवी दी गई। इनके अतिरिक्त जो और धर्मग्रंथ थे वे 'स्मृति' में गिने गए। अतएव वैदिक साहित्य काल के प्रथम दो भागों को हम श्रुति-काल और तीसरे विभाग को स्मृति-काल कह सकते हैं।

इस समय तक धार्मिक क्रियाओं और विधानों का आडंबर इतना बढ़ गया था और इस संबंध में इतना अधिक साहित्य निर्माण हो चुका था कि सबका यथावत् कंठस्थ रखना और ठीक ठीक उपयोग करना बहुत कुछ कठिन हो गया था। अतएव अब इस बात की आवश्यकता हुई कि जहाँ तक संभव हो सब बातें संक्षेप में कही जायँ। इस प्रकार सूत्रकाल में सब बातें कही जाने लगीं और क्रमशः श्रौतसूत्रों और गृह्यसूत्रों की रचना हुई। वेदों की रचना के आरंभ से लेकर सूत्रों के निर्माण तक कई शताब्दियाँ बीत चुकी थीं और इस बीच में आर्यों की स्थिति में बहुत कुछ परिवर्तन हो गया था। वैदिक भाषा भी क्रमशः विकसित, परिमार्जित तथा सुष्ट्वलित होकर नया रूप धारण कर रही थी। इस अवस्था में प्राचीन वैदिक साहित्य का तथ्य समझने में कठिनता होने लगी। इनका ज्ञान रक्षित रखने के लिए वेदांगों की रचना हुई। इनमें से शिक्षा, छन्द, व्याकरण और निरुक्त का सम्बन्ध तो वेदों के ठीक ठीक पाठ करने तथा उनका अर्थ लगाने से है और कल्प तथा ज्योतिष का सम्बन्ध धार्मिक कृत्यों की रीतियों तथा व्यवस्था से है। इस प्रकार वैदिक साहित्य-काल के अंतिम दिनों में उन शास्त्रों का आरम्भ हो गया था जिनकी आगे चलकर विशेष उन्नति हुई।

वैदिक साहित्य काल की समाप्ति के पूर्व ही से परिमार्जित अथवा संस्कृत साहित्य काल का आरम्भ हो गया था। वैदिक साहित्य काल का समाप्ति २०० ई० पू० के लगभग होती है पर संस्कृत काल का आरम्भ लगभग ५०० ई० पू० के होता है और लगभग १००० ई० तक जाता है। इस १५०० वर्षों में संस्कृत साहित्य ने अद्भुत उन्नति की। इसका सर्वोत्कृष्ट समय गुप्तवंशीय राजाओं का है जब अनेक उत्कृष्ट ग्रन्थों की रचना हुई। पर गुप्तों का राज्यकाल आरम्भ होने के पहले ही यहाँ की भाषा में परिवर्तन आरम्भ हो गया था। कुछ विद्वानों का मत है कि वेदों की रचना जिस भाषा में हुई वह बोलचाल की भाषा से कुछ भिन्न था। उनका यह भी कहना है कि बोलचाल की भाषा और लिखने पढ़ने की भाषा अपने अपने स्वतन्त्र रास्तों में प्रवाहित होती रही; जब लिखने पढ़ने की भाषा परिमार्जित होते होते केवल विद्वानों ही की

अन्यथा रह गई तब बोलचाल की भाषा ने हमारा उसका स्थान ग्रहण किया। इस प्रकार यह क्रम निरन्तर चलता रहा। इस सिद्धांत के आधार पर यह कहा जाता है कि बोलचाल की भाषा जनता परिवर्तित या विकसित होते होते बौद्ध काल में पाली के रूप में साहित्यिक हुई। यह पाली संस्कृत से बहुत कुछ मिलती-जुलती है, पर इसमें संस्कृत की अपेक्षा स्वच्छन्दता अधिक है। यह व्याकरण के अधिक नियमों से परिवेष्टित नहीं हुई है। पाली में बौद्ध-साहित्य की रचना हुई है। पाली के अनन्तर भिन्न भिन्न प्राकृतों का समय आता है। इन प्राकृतों में भी यथासंभव ग्रन्थों की रचना हुई और संस्कृत काव्यों में भी इनको स्थान मिला। जैन-साहित्य विशेष कर प्राकृत में लिखा गया। प्राकृतों के अनन्तर अपभ्रंशों का काल आता है। इसमें भी ग्रन्थों की रचना हुई, पर इस भाषा के बहुत थोड़े ग्रन्थों का अब तक पता लगा है। इन अपभ्रंशों के अनन्तर हमारी आधुनिक देश-भाषाओं का समय आता है। इनमें से कई का साहित्य-भांडार बहुत कुछ भरा पूरा है। बँगला, मराठी, गुजराती, हिन्दी,—ये आधुनिक भाषाएं अत्यन्त हैं और इनका भांडार अनेक रत्नों से भरा हुआ है। इन सब भाषाओं में क्रमशः हमारी भावनाओं, विचारों और कल्पनाओं का लिखित भांडार उदय-काल से लेकर अब तक भरता आया है और जब तक इस भूतल पर हमारा अस्तित्व रहेगा तब तक यह भांडार निरन्तर भरता जायगा। इस अमूल्य भांडार का संरक्षण, जिसके आधार पर हमारी आर्य संस्कृति का प्रासाद खड़ा हुआ है, प्रत्येक भारतवासी का कर्तव्य है। इसी संस्कृति के संरक्षण, प्रचार और विकास के उद्देश्य से काशी-विश्वविद्यालय की संस्थापना हुई है। जिन भाषाओं का उल्लेख ऊपर किया गया है उनके पठन-पाठन का आयोजन इस विश्वविद्यालय में किया गया है और उसी आधार पर हमारी संस्कृति के विकास का ध्येय साधने रखा गया है।

यह कहना तो बाहुल्य-मात्र है कि भारतीय संस्कृति के मूर्तीभूत इस काशी विश्वविद्यालय रूपी केंद्र के मूल आधार, जन्मदाता, पन्नायक और परिपोषक तथा संचालक महामना पंडित मदनमोहनजी मालवीय हैं, जिनके हृदय में पहले पहल इस केंद्र के संस्थापन की कल्पना हुई जो और

जिनके अध्यवसाय, उद्योग, स्वार्थत्याग, आत्मशक्ति तथा आशावादिता ने इस स्वप्न को सफल कर दिखाया है। ईश्वर इनकी कामना को सफल कर उसे अमरत्व प्रदान करे—यही प्रत्येक भारतवासी की प्रार्थना है जिसमें भारतीय संस्कृति अक्षुण्ण बनी रहे।

श्यामसुन्दरदास

—(००)—

काव्य में लोक-मंगल की साधनावस्था

यदेवेति तदेवेति—[illegible]

आत्मबोध और जगद्बोध के बीच क्रान्तियों ने गहरी खाई खोदी पर हृदय ने कभी उसकी परवा न की, भावना देवी को वक्ष ही वास कर चलती रही। इस टूटे जगत् के बीच जिस आनन्द-मंगल की विभूति का साक्षात्कार होता रहा उसी के स्वरूप की नित्य और चरम भावना द्वारा भक्तों के हृदय में भगवान् के स्वरूप की प्रतिष्ठा हुई। लोक में इसी स्वरूप के प्रकाश को किसी ने 'रामराज्य' कहा, किसी ने 'आत्मराम की बादशाहत'। यद्यपि मुसाइयों और उनके अनुगामी ईसाइयों की धर्म-पुस्तक में आदम खुदा की प्रतिमूर्ति बताया गया पर लोक के बीच घर में नारायण की दिव्य कला का सम्यक् दर्शन और उसके प्रति हृदय का पूर्ण निवेदन भारतीय भक्तिमार्ग में ही दिखाई पड़ा।

सत्, चित् और आनन्द—ब्रह्म के इन तीन स्वरूपों में से काव्य और भक्तिमार्ग 'आनन्द' स्वरूप को ले कर चले। विचार करने पर लोक में इस आनन्द की अभिव्यक्ति की दो अवस्थाएँ पाई जायेंगी—साधनावस्था और सिद्धावस्था। अभिव्यक्ति के क्षेत्र में ब्रह्म के 'आनन्द' स्वरूप का सतत आभास नहीं रहता, उसका आविर्भाव और तिरोभाव होता रहता है। इस जगत् में न तो सदा और सर्वत्र लहलहाता वसन्त-विकास रहता है, न सुख-सन्तुष्टि-पूर्ण ह्रास-विलास। शिशिर के आतंक से सिकुड़ी और ऑंधी झोंकों से काँपती वनस्थली की सिहरन और पीलता के बीच से ही अनन्त आनन्द की अक्षय आभा धुँधली धुँधली फूटती हुई अन्त में वसन्त की पूर्ण प्रफुल्लता और मधुरता के रूप में फैल जाती है, इसी प्रकार लोक का पीड़ा, दाह, अन्याय, अत्याचार के बीच दबी हुई आनन्द-ज्योति भीषण शक्ति में परिणत होकर प्रबल मार्ग निकालती है और फिर लोकमंगल और लोकरंजन के रूप में अपना प्रकाश करती है।

कुछ कवि और भक्त तो जिस प्रकार आनन्द-मंगल के सिद्ध या आविर्भूत स्वरूप को लेकर सुख-सौन्दर्यमय माधुर्य, सुषमा, विभूति,

उल्लास, प्रेमव्यापार इत्यादि उपभोग-पक्ष की ओर आकर्षित होते हैं उसी प्रकार आनन्द-मंगल की साधनावस्था या प्रयत्न-पक्ष को लेकर पाप, बाधा, अन्याय, अत्याचार आदि के दृश्य में मानव शक्ति के संघर्ष में भी—उत्साह, क्रोध, करुणा, भय, घृणा इत्यादि की गति-विधि में भी—पूरी रसाधीनता लेते हैं। वे जिस प्रकार प्रकाश को फैला हुआ देख कर मुग्ध होते हैं उसी प्रकार फैलने के पूर्व उसका अन्धकार को हटाना देखकर भी। वे ही पूर्ण कवि हैं, क्योंकि जीवन की जटिल परिस्थितियों के भीतर से सौन्दर्य का साक्षात्कार करते हैं। साधनावस्था या प्रयत्न-पक्ष को ग्रहण करनेवाले कुछ ऐसे कवि भी होते हैं जिनका मन सिद्धावस्था या उपभोग-पक्ष की ओर बढ़ी जाता, जैसे, भूषण। इसी प्रकार कुछ कवि या भावुक आनन्द के केवल सिद्ध स्वरूप या उपभोगपक्ष में ही अपनी वृत्ति रमा सकते हैं। उनका मन सदा सुख सौन्दर्यमय माधुर्य, दीप्ति, उल्लास, प्रेमक्रीड़ा इत्यादि के प्राचुर्य ही की भावना में लगता है। इसी प्रकार की भावना या कल्पना उन्हें कला-क्षेत्र के भीतर सफल पड़ती है।

उपर्युक्त दृष्टि से हम काव्यों के दो विभाग कर सकते हैं—

(१) आनन्द की साधनावस्था या प्रयत्न पक्ष को लेकर चलनेवाले।

(२) आनन्द की सिद्धावस्था या उपभोग पक्ष को लेकर चलनेवाले।

डंटन (Theodore Watts-Dunton) ने जिसे शक्ति-काव्य (Poetry as an energy) कहा है वह हमारे प्रथम प्रकार के अन्तर्गत आ जाता है जिसमें लोक-प्रवृत्ति का परिचालित करनेवाला प्रभाव होता है, जो पाठकों या श्रोताओं के हृदय में भावों की स्थायी प्रेरणा उत्पन्न कर सकता है। पर डंटन ने शक्तिकाव्य से भिन्न को जो कला-काव्य (Poetry as an art) कहा है वह कला का उद्देश्य केवल मनोरंजन मान कर। वास्तव में कला की दृष्टि दोनों प्रकार के काव्यों में अपेक्षित है। साधनावस्था या प्रयत्न-पक्ष को लेकर चलनेवाले काव्यों में भी यदि कला में चूक हुई तो लोकवृत्ति को परिचालित करनेवाला स्थायी प्रभाव न उत्पन्न हो सकेगा। यहीं तक नहीं, व्यंजित भावों के साथ पाठकों की

सहानुभूति या साधारणीकरण तक, जो रस की पूर्ण अनुभूति के लिए आवश्यक है, न हो सकेगा। यदि 'कला' का यही अर्थ लेना है जो काव्यशास्त्र की चौंसठ कलाओं में है—अर्थात् मनोरंजन या उपभोग-मात्र का विधायक—तो काव्य के सम्बन्ध में दूर ही से इस शब्द को नमस्कार करना चाहिए। काव्य-सर्वोच्चता में फ्रांसीसियों की प्रधानता के कारण इस शब्द को इसी अर्थ में ग्रहण करने से बीसवीं में काव्य-दृष्टि दूषित कितनी संकुचित हो गई, इसका निरूपण हम किसी अन्य प्रबन्ध में करेंगे।

आनन्द की भावनावस्था या प्रबन्ध-पक्ष को लेकर चलनेवाले काव्यों के उदाहरण हैं—रामायण, महाभारत, रघुवंश, शिशुपाल-वध, किरातार्जुनीय। हिन्दी में रामचरित-मानस, पद्मावत (उत्तरार्द्ध), हम्मीररासो, पृथ्वीराजरासो, छत्रप्रकाश इत्यादि प्रबन्धकाव्य, भूषण आदि कवियों के वीररसात्मक मुक्तक तथा आल्हा आदि प्रचलित वीरगाथात्मक गीत। उर्दू के वीररसात्मक मरसिये। वीरगीत भाषाओं में इलियड, ओडेसी, पैराडाइज़ लास्ट, रिजेन्ट्स ऑफ इसलाम इत्यादि प्रबन्ध-काव्य तथा पुराने बैलेड (Ballads)

आनन्द की सिद्धावस्था या उपभोग-पक्ष को लेकर चलनेवाले काव्यों के उदाहरण हैं—सप्तशती, गाथा-सप्तशती, अमरु-शतक, गीतगोविन्द तथा शृंगाररस के मुक्तक पद्य। हिन्दी में सूरसागर, कृष्णभक्त कवियों की पदावली, बिहारी-सतसई, रीतिकाल के कवियों के मुक्तक शृंगारी पद्य, रास-पंचाध्यायी ऐसे वर्णनात्मक काव्य तथा आजकल की अधिकांश छायावादी कविताएं। फ़ारसी उर्दू के शेर और ग़ज़लें। अंगरेज़ी की लिरिक कवितायें (Lyrics) तथा कई प्रकार की वर्णनात्मक कविताएँ।

आनन्द की साध्यावस्था

लोक में फैली दुःख की छाया को हटाने में जहाँ की आनन्द-कला जो शक्तिमय रूप धारण करती है उसकी भीषणता में भी अद्भुत मनोहरता, कटुता में भी अपूर्व मधुरता, प्रचण्डता में भी गहरी आर्द्रता लाया करती रहती है। बिल्कुल का यही सामञ्जस्य कर्म-क्षेत्र का सौन्दर्य है जिसकी ओर आकर्षित हुए बिना मनुष्य का हृदय

नहीं रह सकता। इस सामंजस्य का और कई रूपों में भी दर्शन होता है। किसी कोट-पतलून-हैट-वाले को धाराप्रवाह संस्कृत बोलते अथवा किसी पण्डित-वेशधारी सज्जन को अँगरेज़ी की प्रगल्भ वक्तृता देते सुन व्यक्तित्व का जो एक चमत्कार सा दिखाई पड़ता है उसकी तह में भी सामंजस्य का यही सौन्दर्य समझना चाहिए। मीठापन और तरलता, कोमलता और कठोरता, कटुता और मधुरता, गंभीरता और चटुलता का सामंजस्य ही लोकधर्म का सौन्दर्य है। आदि-कवि वाल्मीकि की वाणी इसी सौन्दर्य के उद्घाटन-साहसरूप का दिव्य संगीत है। सौन्दर्य का वह उद्घाटन असौन्दर्य का आवरण हटा कर होता है। धर्म और मंगल की यह ज्योति अधर्म और अमंगल की घटा को फाड़ती हुई फूटती है। इसके कवि हमारे सामने असौन्दर्य, अमंगल, अत्याचार, क्लेश इत्यादि भी रखता है, रोष, हाहाकार और त्रास का दृश्य भी लाता है। पर साथ ही भाव, साथ ही रूप और साथ ही व्यापार भीतर भीतर आनन्द-कला के विकास में ही योग देते चले जाते हैं। यदि किसी ओर उन्मुख आनन्द रोष है तो उसके और सब ओर करुण दृष्टि फैली दिखाई पड़ती है। यदि किसी ओर त्रास और हाहाकार है तो और सब ओर उसका सहानुभूति रक्षा और कल्याण है। व्यास ने भी अपने 'जयकाव्य' में अधर्म के पराजय और धर्म की जय का सौन्दर्य प्रत्यक्ष किया था।

वह व्यापकता या वृत्ति जिससे लोक में मंगल का विधान होता है, 'अभ्युदय' की सिद्धि होती है, धर्म है। अतः अधर्मवृत्ति को हटाने में धर्म-वृत्ति की तत्परता—चाहे वह उग्र और प्रचंड हो, चाहे कोमल और मधुर—भगवान की आनन्द-कला के विकास की ओर बढ़ती हुई गति है। यह गति यदि सफल हुई तो 'धर्म की जय' कहलाती है। इस गति में भी सुन्दरता है और इसकी सफलता में भी। यह बात नहीं है कि जब यह गति सफल होती है तभी इसमें सुन्दरता आती है। गति में सुन्दरता रहती ही है, आगे चल कर चाहे वह सफल हो, चाहे विफल। विफलता में भी एक विशेष ही विषण्ण सौन्दर्य होता है। तात्पर्य यह कि यह गति आदि से अंत तक सुन्दर होती है—अंत चाहे सफलता के रूप में हो चाहे विफलता के। कदाचित् दोनों आर्य कवियों ने पूर्णता के विचार से धर्म

की गति का सौन्दर्य दिखाते हुए उसका सफलता में पर्यवसान किया है। ऐसा उन्होंने उपदेशक की बुद्धि से नहीं किया है, धर्म को ज्ञान के बीच भगवान की मूर्ति के साक्षात्कार पर मुग्ध होकर किया है। यदि राम द्वारा रावण का वध तथा कृष्ण के सहायत्व द्वारा जरासन्ध और कौरवों का दमन न हो सकता तो भी रामकृष्ण की गति-विधि में पूरा सौन्दर्य रहता, पर उनमें भगवान का पूर्ण कला का दर्शन न होता, क्योंकि भगवान को शक्ति अनोघ है।

आनन्द-कला के प्रकाश की ओर बढ़ती हुई गति की विफलता में भी सौन्दर्य का दर्शन करनेवाले अनेक कवि हुए हैं। अँगरेज कवि शेली संसार में फैले पाशव अत्याचार और अत्याचार के दमन तथा मनुष्य मनुष्य के बीच सीधे सरल भ्रातृभाव के सार्वभौम संसार का स्वप्न देखनेवाले कवि थे। उनके 'इसलाम का विद्रोह' (The Revolt of Islam) नामक द्वादश-सर्गात्मक महाकाव्य में मनुष्य जाति के उद्धार में रत नायक और नायिका (Laon and Cythna) में मंगल-शक्ति के अपूर्व संघर्ष को छटा दिखाकर तथा उनके द्वारा एक बार दुर्दान्त अत्याचार के पराभव के मनोरम आभास से अनुरंजित करके अन्त में उस शक्ति की विफलता की निराशा-जनक छाया से लोक का फिर आकुल किया कर छोड़ दिया है।

जैसा ऊपर कह आए हैं, मंगल-शक्ति के युद्ध में कवि लोग अन्त में मंगल-शक्ति की ओर सफलता दिखा दिया करते हैं उसमें सदा शिशावाद (Dideticism) या अलोकिकता की गंध समझ कर नाक भौं सुकोड़ना ठीक नहीं। अलोकिकता तभी आएगी जब लोक का विधान ठीक न होगा अर्थात् जब प्रत्येक अवसर पर सत्पात्र सफल और दुष्ट पात्र विफल या आहत दिखाए जायगे। पर सच्चे कवि ऐसा कभी नहीं करते। इस जगत् में अन्यायी प्रायः दुर्दमनीय शक्ति प्राप्त करता है जिसके सामने धर्म की शक्ति बार बार उठ कर व्यर्थ होती रहती है। कवि जहाँ मंगल-शक्ति की सफलता दिखाता है वहाँ कला की दृष्टि से सौन्दर्य का प्रभाव दर्शाने के लिए, धर्मशासक की हैसियत से उसके लिए नहीं कि यदि ऐसा कर्म करोगे तो ऐसा फल पाओगे। कवि कर्म-सौन्दर्य के प्रभाव द्वारा प्रवृत्ति या निवृत्ति अन्तःप्रकृति में उत्पन्न करता है, उसका उपदेश नहीं देता।

कवि सौन्दर्य से प्रभावित रहता है और दूसरों को भी प्रभावित करना चाहता है। किसी रहस्यमयी अवस्था से उसकी कल्पना में कई प्रकार के सौन्दर्यों का जो मेल आपसे आप हो जाया करता है उसे पाठक के सामने भी वह प्रायः रख देता है जिस पर कुछ लोग कह सकते हैं कि ऐसा मेल क्या संसार में बराबर देखा जाता है। मंगल-शक्ति के अधिष्ठान राम और कृष्ण जैसे पराक्रमशाली और वीर हैं वैसा ही उनका रूप-माधुर्य और उनका शील भी लोकोत्तर है। लोक-हृदय आकृति और गुण, सौन्दर्य और सुशीलता, एक ही अधिष्ठान में देखना चाहता है। इसी से 'यत्राकृतिस्तत्र गुणा वसन्ति' लाक्षणिक का यह उक्ति लोकोक्ति के रूप में चल पड़ी। 'सैफो' में नल इस से कहते हैं—

न तुला-विषये तवाकृतिर्वचनीयत्वमियाय ते सुशीलता।
त्वदुदाहरणाद्गुणा इति मत्सुहृदिक-सार-सुन्दरा॥

भीतरी और बाहरी सौन्दर्य, रूप-सौन्दर्य और कर्म-सौन्दर्य के मेल की यह आदत भीरोहास आदि वेद-विरचना से बहुत पुरानी है और बिलकुल छूट भी नहीं सकती। यह हृदय का एक भीतरी वासना को तृप्ति के हेतु कला की रहस्यमयी प्रेरणा है। १९ वीं शताब्दी के कवि शेली—जो राजशासन, धर्मशासन, समाज-शासन आदि सब प्रकार की शासन-व्यवस्था के घोर विरोधी थे—इस प्रेरणा से पीछा न छुड़ा सके। उन्होंने भी अपने प्रबन्ध-काव्यों में रूप-सौन्दर्य और कर्म-सौन्दर्य का ऐसा ही मेल किया है। उनके वाचक (या नायिका) जिस प्रकार पीड़ा, अत्याचार आदि से मनुष्य-जाति का उद्धार करने के लिए अपना प्राण तक उत्सर्ग करनेवाले, घोर से घोर कष्ट और यन्त्रणा से मुँह न मोड़नेवाले, पराक्रमी, दयालु और वीर हैं उसी प्रकार रूप-माधुर्य-सम्पन्न भी।*

* Certain it is that with Shelley goodness is ever near to generous beauty and passing easily into passion. Hence his choice of heroic types rather than simple ones, as Laon, Cythna and Prometheus rather than Michael, Mathew, etc. Laon and Cythna possess youth, strength and beauty no less than courage and the instinct for self-sacrifice and their passion for freedom. A further admirable instance of this harmony of goodness and beauty is seen in the description of Lady Beneficence who tended the garden of 'The Sensitive Plant'.

— 'Studies in Shelley' by A. T. Strong.

आज भी किसी कवि से राम की शारीरिक सुन्दरता कुंभकर्ण की और कुंभकर्ण की कुरूपता राम को न देते बनेगा। माइकेल मधुसूदन दत्त ने मेघनाद को अपने काव्य का रूप-गुण-सम्पन्न नायक बनाया पर लक्ष्मण को वे कुरूप न कर सके। उन्होंने जो उलटफेर किया वह कला या काव्यानुभूति की किसी प्रकार की परंपरा से नहीं, बल्कि एक पुरानी धारणा तोड़ने की बहादुरी दिखाने के लिए, जिसका शौक किसी विदेशी कवि शिक्षा के पहले पहल प्रचलित होने पर प्रायः सब देशों में कुछ दिन रहा करता है। इसी प्रकार बंगभाषा के एक दूसरे कवि नवीनचन्द्र ने अपने 'कुरुक्षेत्र' नामक काव्य में कृष्ण का आदर्श ही बदल दिया है। उसमें वे ब्राह्मणों के अत्याचार से पीड़ित जनता के उद्धार के लिए उठ खड़े हुए एक क्षत्रिय महात्मा के रूप में अंकित किए गए हैं। अपने समय में उठी हुई किसी स्वतंत्र इच्छा की झोंक में प्राचीन आर्य काव्यों के पूर्णतया निर्दिष्ट स्वभाववाले आदर्श पात्रों को एकदम कोई नया मन-माना रूप देना भारती के पवित्र मन्दिर में उथल-पुथल मचाना है।

शुद्ध सर्वानुभूति द्वारा परिपक्व कुशल कवि भी प्राचीन आख्यानों को बराबर लेते आए हैं और अब भी लेते हैं। वे उनके पात्रों में अपनी नवीन उद्भावना का, अपनी नई कल्पित बातों का, बराबर आरोप करते हैं, पर वे वहाँ उन पात्रों के चिर-प्रतिष्ठित आदर्शों के मेल में होते हैं। केवल अपने समय की परिस्थिति विशेष का लेकर जो भावनाएँ कवियों के मानस के लिए जब कि नये आख्यानों और नये पात्रों की उद्भावना स्वच्छन्दता-पूर्वक की जा सकती है तब पुराने आदर्शों को विकृत या खंडित करने की क्या आवश्यकता है?

कर्म-सौन्दर्य के जिस स्वरूप पर मुग्ध होना मनुष्य के लिए स्वाभाविक है और जिसका विधान कवि-परम्परा बराबर करती चली आ रही है, उसके प्रति उपेक्षा प्रकट करने और कर्मसौन्दर्य के एक दूसरे पक्ष में ही—केवल प्रेम और आत्मभाव के प्रदर्शन और आचरण में ही—काव्य का उत्कर्ष मानने का जो एक नया फैशन टालस्टाय के समय से चला है वह एक नवीनता है। दीन और असहाय जनता को निरन्तर पीड़ा पहुँचाते चलने वाले क्रूर शासकों को उपदेश देने,

बनने दया की भिक्षा माँगने और प्रेम जताने तथा उनकी सेवा-शुश्रूषा करने में ही कर्त्तव्य की सीमा नहीं मानी जा सकती, कर्मक्षेत्र का एक मात्र सौन्दर्य यहीं कहा जा सकता। मनुष्य के शरीर के जैसे दक्षिण और वाम दो पक्ष हैं वैसे ही उसके हृदय के भी कोमल और कठोर, मधुर और तीक्ष्ण, दो पक्ष हैं और बराबर रहेंगे। काव्य-कला की पूरी सफलीभूतता इन दोनों पक्षों के समन्वय के साथ मंगल या सौन्दर्य के विकास में दिखाई पड़ती है।

भावों की प्रतिष्ठा की समीचीनता से पता चलता है कि उदय से अस्त तक भाव-संघर्ष का कुछ भाग तो मानव की चेतना के प्रकाश में (Consciousness) रहता है और कुछ अन्तश्चेतना के क्षेत्र (Sub-consciousness region) में छिपा रहता है। संचारी भावों के संघरण-काल में कभी कभी उनके स्थायी भाव कारण-रूप में अन्तश्चेतना के भीतर पड़ जाते हैं। रतिभाव में संचारी होकर आई हुई असूया या ईर्ष्या ही को लीजिए। जिस क्षण में वह अपनी चरम सीमा पर पहुँची हुई होती है उस क्षण में आलंबन को ही रति-भाव की कोमल सत्ता का ज्ञान नहीं रहता, उस क्षण में उसके भीतर ईर्ष्या का ही तीव्र प्रतीति रहती है और बाहर ईर्ष्या के ही लक्षण दिखाई देते हैं। जिस प्रकार किसी आश्रय के भीतर कोई एक भाव स्थायी रहता है और अनेक भाव तथा अन्तर्दशाएँ उसके संचारी के रूप में आती हैं उसी प्रकार किसी प्रबन्धकाव्य के प्रधान पात्र में कोई सूत्रप्रेरक भाव या बीजभाव रहता है जिसकी प्रेरणा से घटना-चक्र चलता है और अनेक भावों को स्फुरण के लिए जगह निकलती चलती है। इस बीजभाव का साहित्य-ग्रन्थों में निरूपित स्थायीभाव और अंगी-भाव दोनों से भिन्न समझना चाहिए।

बीजभाव द्वारा स्फुरित भावों में कोमल और मधुर—कठोर और तीक्ष्ण—दोनों प्रकार के भाव रहते हैं। यदि बीजभाव की प्रकृति मंगल-विधायिनी होती है तो उसकी व्यापकता और निर्विशेषता के अनुसार सारे रौद्र भाव तीक्ष्ण और कठोर होने पर भी सुन्दर होते हैं। ऐसे बीजभाव की प्रतिष्ठा जिस पात्र में होती है उसके सब भावों के साथ पाठकों का सहानुभूति होती है अर्थात् पाठक या श्रोता भी स्वरूप में

अच्छी भावों का अनुभव करते हैं जिन भावों को वह व्यंजना करता है। ऐसे पात्र की गति में बाधा डालनेवाले पात्रों के प्रति या लोकप्रिय भावों के साथ पाठकों का वास्तव में तादात्म्य नहीं होता, चाहे उनकी व्यंजना में रस की निष्पत्ति करनेवाले सीमों अवयव वर्तमान हों। राम यदि रावण के प्रति क्रोध या घृणा की व्यंजना करेंगे तो पाठक या श्रोता का भी हृदय उस क्रोध या घृणा की अनुभूति में योग देगा। इस क्रोध या घृणा में भी काव्य का पूर्ण सौन्दर्य होगा। पर रावण यदि राम के प्रति क्रोध या घृणा की व्यंजना करेगा तो रस के सीमों अवयवों के कारण "शास्त्र-स्थिति-सम्पादन" * चाहे हो जाय पर उस व्यंजित भाव के साथ पाठक के भाव का तादात्म्य कभी न होगा, पाठक केवल चरित्र द्रष्टा मात्र रहेगा उसका केवल मनोरंजन होगा, भाव में लीन करनेवाली प्रगाढ़ कोटि की रसानुभूति उसको न होगी।

ऊपर कहा गया है कि किसी गुप्त बीजभाव की प्रेरणा से प्रवर्तित लोकप्रिय और उच्च भावों की सुन्दरता की मात्रा उस बीजभाव की निर्विरोधता और व्यापकता के अनुसार होती है। जैसे, यदि कथा किसी व्यक्ति की विरोधता पर आधारित होगी—कि वीरेन्द्र व्यक्ति द्वारा कुछ भी चित्र आदि है—तो उस कथा के द्वारा प्रवर्तित लोकप्रिय या उच्च भावों में उतनी सुन्दरता न होगी। पर बीजरूप में सम्पन्नता में स्थित कथा यदि इस ढंग की होगी कि इतने गुणवालों, इतने देशवालों या इतने मनुष्य पीड़ा पा रहे हैं तो उसके द्वारा प्रवर्तित लोकप्रिय या उच्च भावों का सौन्दर्य उत्तरोत्तर अधिक होगा। यदि किसी काव्य में वर्णित दो पात्रों में से एक तो अपने भाई को अत्याचार और पीड़ा से बचाने के लिए आतुर हो रहा है और दूसरा किसी बड़े भारी जन-समूह को हो गति में बाधा डालनेवालों के प्रति दोनों के प्रदर्शित क्रोध के सौन्दर्य के परिमाण में बहुत अन्तर होगा।

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* रसस्थितिरपेक्षैवानुकार्यस्य स्थितिर्यथा।
न तु केवलया शास्त्र-स्थिति-सम्पादनेच्छया॥

दशरूपकावलोक।

भावों की छानबीन करने पर मंगल का विधान करनेवाले दो भाव ठहरते हैं—करुणा और प्रेम। करुणा की गति रक्षा की ओर होती है और प्रेम की रंजन की ओर। लोक में प्रधान साध्य रक्षा है। रंजन का अवसर उसके पीछे आता है। अतः लोकावस्था या प्रजापालन को लेकर चलनेवाले काव्यों का बीजभाव करुणा ही ठहरता है। इसी से शायद अपने दो नाटकों में राजचरित को लेकर चलनेवाले महाकवि भवभूति ने 'करुण' को ही एक-मात्र रस कह दिया। रामायण का बीजभाव करुणा है जिसका संकेत क्रौंच को मारनेवाले निषाद के प्रति वाल्मीकि के मुँह से निकले वचन-द्वारा आरंभ ही में मिलता है। उसके उपरान्त जो बालकांड के १५ वें सर्ग में इसका आभास दिया गया है जहाँ देवताओं ने ब्रह्मा से राक्षस-द्वारा पीड़ित लोक की दारुण दशा का निवेदन किया है। कुछ आदि काव्य के भीतर लोक-मंगल की शक्ति के उदय का आभास ताड़का और वारीच के दमन के प्रसंग में ही मिल जाता है। पंचवटी से वह शक्ति और प्रकटली दिखाई देती है। सीता-हरण होने पर उसमें आत्मगौरव और दाम्पत्य प्रेम की प्रेरणा का भी योग हो जाता है। ध्यान देने की बात यह है कि इस आत्म-गौरव और दाम्पत्य प्रेम की प्रेरणा बीच से प्रकट होकर उस विराट् मंगलोन्मुखी गति में समन्वित हो जाती है। यदि राक्षसराज पर चढ़ाई करने का मूल कारण केवल आत्मगौरव या दाम्पत्य प्रेम होता तो राम के 'कालानि-सदृश क्रोध' में काव्य का वह लोकोत्तर सौन्दर्य न होता। लोक के प्रति करुणा जब सफल हो जाती है, लोक जब पीड़ा और विप्र-बाधा से मुक्त हो जाता है तब रामराज्य में जाकर लोक के प्रति प्रेम-प्रदर्शन का, प्रजा के रंजन का, उसके अधिकाधिक सुख के विधान का, अवकाश मिलता है।

जो कुछ ऊपर कहा गया है उससे यह स्पष्ट है कि काव्य का उत्कर्ष केवल प्रेमभाव की कोमल व्यंजना में ही नहीं माना जा सकता जैसा कि टालस्टाय के अनुयायी या कुछ कलावादी कहते हैं। क्रोध आदि उग्र और प्रचंड भावों के विधान में भी, यदि उनकी तह में करुण-भाव अव्यक्त रूप में स्थित हो, पूर्ण सौन्दर्य का साक्षात्कार होता है। स्वतंत्रता

के उन्मत्त उपासक, और परिवर्तनवादी शेली के महाकाव्य (The Revolt of Islam) के नायक-नायिका अत्याचारियों के पास जाकर उपदेश देने वाले, गिड़गिड़ानेवाले, अपनी साधुता, सहनशीलता और शान्त वृत्ति का चमत्कारपूर्ण प्रदर्शन करनेवाले नहीं हैं। वे भरतार्थ की जगह में प्रचंड वेग से युद्धक्षेत्र में कूदनेवाले, पागल, लोकपीड़ा और अत्याचार देख पुनीत क्रोध के सात्त्विक वेग से तमतमानेवाले, भय या स्वार्थवश आततायियों की सेवा स्वीकार करनेवालों के प्रति उपेक्षा प्रकट करनेवाले हैं। शेली ने भी काव्यकला का कृतकृत्य प्रेमभाव ही माना था पर अपने का सुख-सौन्दर्य-मय माधुर्यभाव तक ही बद्ध न रख कर प्रकृतक्षेत्र में भी जगह तरह बुरा कर भावों की अनेकरूपता का विश्वास किया था। स्थिर (Static) सौन्दर्य और गत्यात्मक (Dynamic) सौन्दर्य, उपभाग-पक्ष और उपयोग-पक्ष, दोनों उनमें पाए जाते हैं।

टालस्टाय के अनुसार अनुकरण में जाने ऐक्य-संचार को ही एक मात्र काव्यतत्त्व कहने का बहुत कुछ कारण सामयिक था। इसी प्रकार कलावादियों का केवल कोमल और मधुर की लोक पकड़ना अनेकांगिक मात्र की हलकी रुचि और दृष्टि की परिणति के कारण समझना चाहिए। टालस्टाय के अनुयायी प्रयत्न-पक्ष को लेते अवश्य हैं पर केवल पीड़ितों की सेवा-शुश्रूषा की दृष्टि से, आततायियों पर प्रभाव डालने के लिए साधुता के लोकोत्तर-प्रदर्शन, त्याग, कष्ट-सहिष्णुता इत्यादि में ही उसका सौन्दर्य स्वीकार करते हैं। साधुता को इस मृदुल गति को वे 'आध्यात्मिक शक्ति' कहते हैं। पर भारतीय दृष्टि से हम इसे भी प्राकृतिक शक्ति—मनुष्य की अन्तःप्रकृति की सात्त्विक विभूति—मानते हैं। विदेशी अर्थ में इस 'आध्यात्मिक' शब्द का प्रचार हमारी देशभाषाओं में भी प्रचार पा रहा है। 'अध्यात्म' शब्द की, मेरी समझ में, काव्य या कला के क्षेत्र में कहीं कोई जरूरत नहीं है।

पूर्ण प्रभविष्णुता के लिए काव्य में हम भी सत्वगुण की सत्ता आवश्यक मानते हैं, पर तीनों रूपों में—दूसरे भावों की तह में अर्थात् अन्तःसत्ता में स्थित कारणरूप बीजरूप में भी और प्रकाशरूप में भी। इस

पहले कह आए हैं कि लोक में मंगल-विधान की ओर प्रवृत्त करनेवाले दो भाव हैं—करुणा और प्रेम। यह भी दिखा आए हैं कि क्रोध, युद्धोत्साह आदि प्रचंड और उग्र वृत्तियों की तह में यदि इन दोनों में से कोई भाव मौजूद होगा तभी सच्चा साधारणीकरण और पूर्ण सौंदर्य का प्रकाश होगा। उग्र दशा का प्रेम और करुणा दोनों सत्वगुण-प्रधान हैं। त्रिगुणों में सत्वगुण सबके ऊपर है। यहाँ तक कि उसकी ऊपरी सीमा नित्य पारमार्थिक सत्ता के पास तक—व्यक्त और अव्यक्त की संधि तक—जा पहुँचती है। इसी से शायद वल्लभाचार्यजी ने सच्चिदानन्द के सत् स्वरूप का प्रकाश करनेवाली शक्ति को 'सन्धिनी' कहा है। व्यवहार में भी 'सत्' शब्द के दो अर्थ लिये जाते हैं—'जो वास्तव में हो', तथा 'अच्छा या शुभ'।

जब कि अव्यक्तावस्था से छूटी हुई प्रकृति के व्यक्त स्वरूप जगत् में आदि से अंत तक सत्व, रजस् और तमस् तीनों गुण रहेंगे तब समष्टिरूप में लोक के बीच संघर्ष का विधान करनेवाली जड़ की आनन्द-कला के प्रकाश की यही पद्धति हो सकती है कि तमोगुण और रजोगुण दोनों सत्वगुण के अधीन होकर उसके इशारे पर काम करें। इस दशा में किसी ओर अपनी प्रवृत्ति के अनुसार काम करने पर भी समष्टिरूप में और सब ओर से सत्वगुण के लक्ष्य की ही पूर्ति करेंगे। सत्वगुण के इस शासन में कठोरता, उग्रता और प्रचंडता भी सात्त्विक तेज के रूप में भासित होंगी। इसी से अवतार-रूप में हमारे यहाँ भगवान् की मूर्त्ति एक ओर तो 'वज्रादपि कठोर' और दूसरी ओर 'कुसुमादपि मृदु' रखी गई है—

कुलिसहु चाहि कठोर अति, कोमल कुसुमहु चाहि।

—रामचंद्र शुक्ल

THE DAWN OF LYRICAL POETRY IN BENGAL

THE TWO LUMINARIES

Like the Aśvins, who bring the first light to the sky and are closely followed by Dawn in all her charming graces, there appeared, in the poetic horizon of Bengal, two luminaries whose stellar symphony, while unfolding the highest excellence of celestial lyrical poetry, invoked the advent of the God of Love, though unconsciously, yet so effectively that within a century Śrīkṛṣṇa of Vṛndāvan came down on this earth again as Śrīgauraṅga of Navadvīpa, as if to taste the ambrosial sweetness of the songs of Vidyāpati and Caṇḍīdās, and also to answer the creation of imagination of the latter seer in a concrete form as the Incarnation of Love!

These two great poets have been held in high esteem, amounting to veneration, not only by subsequent poets who composed Rādhā-Kṛṣṇa songs in imitation of them, but also by saints, philosophers, historians, critics and the general public from the time the songs were composed down to our own time in which the fame of these two great poets has outstripped the geographical limits of Bengal due to the appreciative remarks and eulogiums of some eminent European and Indian scholars.

To quote but a few among a host, the homage paid to Vidyāpati and Caṇḍīdās by Govindadās, who was Śrīkṛṣṇa-Caitanya's contemporary and a poet of the first rank, second to none but this illustrious pair, is significant as an evidence of the influence exercised by the writings of this immortal pair on the subsequent lyrical poetry of Bengal. Govindadās invokes inspiration from Caṇḍīdās

in these terms :—"Caṇḍīdās, I place your feet on my head to decorate it as the jewel of thought ; I who am mean and worthless, entertain a hope which can only be realized through your kindness . . . . Poor Govindadās invokes your blessings towards the fulfilment of his desire to sing about the glory of the two (Rādhā and Kṛṣṇa) before devoted followers."[1]

He praises Vidyāpati also as one who has fascinated the whole world with his poetical songs (বাক্যেতে জগতমোহন বোহয়ত); and after describing the various points of excellence in his poems characterises his own irresistible desire to compose songs on the same subject as that of a dwarf to catch the moon (বেঙ্গন বামন কামহি চন্দে)

It has already been mentioned that Śrīkṛṣṇa Caitanya, who is regarded as an Avatār by Vaiṣṇavas, loved to sing the songs of Vidyāpati and Caṇḍīdās These served as an inspiration, and often while reciting them his emotions would be so excited as to bring about ecstatic trances.

The songs were composed in the fourteenth century, and for over five centuries they have been influencing the emotional life of Bengal.

The late Mr R. C. Dutt wrote in his History of the Literature of Bengal —"Sweet Vidyāpati, Sweet Caṇḍīdās, the earliest stars in the firmament of Bengali Literature. Long, long will your strains be remembered and sung in Bengal."

Dr D. C Sen says in his Bengali treatise on Bengali Language and Literature that had it not been for the charming attraction of Caṇḍīdās' poetry, he would not have explored and discussed old Bengali Literature.

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[1] চণ্ডীদাস চরণ, নিজ শিরে ভূষণ, হীন কবি ভূপ।
সাধারণ অধি, হীন অকিঞ্চনে করুণা করি পুরুব আশা ॥
দুহুঁক চরিত গাওন করি বাঞ্ছিত রসিক ভকতক পাশ।
যব অবসান, সফল করু পূরুব কাজ হীন গোবিন্দদাস ॥

From the evidence on record the natural conclusion is that there must be factors of permanent human interest and of substantial intrinsic value which constitute the excellence of the songs which have been handed down from generation to generation during these long five hundred years.

In an article like this, limited by space, only a cursory view is possible, which may indicate the essential aspects of the poetry of Vidyāpati and Caṇḍīdās, who must not only be read in the original but heard recited by a competent rhapsodist, like Paṇḍit Ramkanai Bhattacharya of Benares and other eminent Kirtan singers of Bengal, who, while amusing and dazzling the audience with the sensuous brilliance of these songs, suddenly casts off the concrete garb and soars up into the higher regions of spirituality to which the attention of the audience is automatically directed.

Before we can fully appreciate the poetry of Vidyāpati and Caṇḍīdās we must first of all fix a norm to which we may refer for guidance. This will be done after giving here very brief sketches of their lives.

Life of Caṇḍīdās and the Sahajia Cult

Caṇḍīdās was born in 1418 A. D. in a village in Birbhūm. He was an orphan whom the good people of Nānnur employed as the priest at the temple of Vāsulī Devī, from whom, according to tradition, the poet got his inspiration in a dream. Living in a thatched cottage near the temple in the midst of beautiful natural surroundings, the heart of Caṇḍīdās imbibed the naturalness and spirituality of the environment. At the instance of Vāsulī Devī Caṇḍīdās embraced the Sahajia cult whose basic idea was to utilize the natural affinity between man and woman to excite the erotic emotions to the highest pitch possible; and thus beginning from the concrete and sensuous to raise the

devotee to the region of love divine which is abstract and spiritual. This transmutation of the sensual love into the divine one brings salvation within the reach of the devotee. This short cut to salvation is, however, fraught with dangerous pitfalls. The cult had already degenerated into mere sensuality, when Caṇḍīdās was enjoined by the goddess to embrace it to revive its spiritual significance. The poet really gave it a new life and spirituality which raised it once more to its original level.

The poet died while reciting his songs in a neighbouring village from the sudden collapse of a roof.

Life of Vidyāpati.

Vidyāpati was born towards the end of the fourteenth century in a famous Brāhmaṇa family in Mithilā. The exact date of his birth is not fixed yet. He enjoyed a long life extending over nearly a century. Under the patronage of the king of Mithilā he wrote several books in Sanskrit. He was an accomplished scholar.

There are many reasons for Vidyāpati's name being included among those of Bengali poets.[1]

Why the two names are associated together.

The names of Vidyāpati and Caṇḍīdās are generally mentioned together. No definite reason can be assigned for this. The association of these two great names however might have grown out of several considerations.

First of all, they were contemporaries. Secondly, in poetic greatness they were towering personalities, much higher not only than their predecessors and contemporaries who were no better than doggerel-makers, or at best mere versifiers, but also at least as high as any in subsequent

[1] For details see (i) Dr. Sen's *Banga Bhāṣā O Sāhitya*, (ii) *Bangabhāṣar Lekhak* (Bangabasi Office)

ages. Śrīkṛṣṇa-Caitanya had special and equal regard for the pair whose songs always inspired him.

Whatever be the reason, this association of the two sacred names appears to us to synthesise all the points of excellence of the Great Lyric.

Vidyāpati's sweetness, music colour and brilliance, put side by side with Caṇḍīdās' depth of thought and pathos, simplicity and spirituality, give us an emotional treat of the highest excellence

These two great poets met each other on the bank of the Bhāgīrathī. After this meeting Vidyāpati's songs inclined more and more towards spirituality.

Essentials of poetry in general and those of Lyrical Poetry in particular

Before quoting a few songs from the works of these two poets, it would be better to recall the essential features of poetry in general and those of lyrical poetry in particular.

It is not easy to define poetry. It does not matter much because we can recognise poetry though we may not be able to explain what it is Milton has guided us in the matter by insisting on three essential features of Poetry, namely, simplicity, sensuousness and passion Of the trinity, by far the most important is the last one which, according to both Milton and Wordsworth, is the essence of Poetry Wordsworth explains passion to be "the spontaneous overflow of powerful feelings" The Hindu rhetoricians had already laid down emotion as the soul of poetic language. But this soul requires a body for its manifestation, and hence the necessity for the incorporation of the other two factors cannot be ignored By sensuousness is meant the concrete aspect of poetry It deals with concrete objects in the Universe, both animate and inanimate, and their interaction with one another Of this again the most interesting thing for the poet is man,

whose thoughts, actions and emotions are portrayed by him The word sensuous has a very wide range of application from the meanest carnality to the purest sublimity The point to be noticed in connection with this ingredient of Poetry is that sensuousness or concreteness cannot be divorced from Poetry even when it is of the most abstract nature. Redness cannot stand without a concrete support like the rose or the lotus, the deep sea of pathos in the Uttara-Rama Carita is created by the tears shed by Rama, and the sublime speculations about the mysteries of life, death and transmigration of the soul have their counterparts in the concrete human beings, Hamlet and Cato.

The remaining quality of simplicity means sincerity on the part of the poet. The poet views the world with open eyes with the catholicity and simplicity of a child, but with a seer's vision which penetrates into the deeper and more permanent elements of human life. Transient and superficial fashions, glamours and colours are of less interest to him than 'man in nature.'

In poetry the above-mentioned essential qualities are associated with a special mode of expression known as poetic diction.

Poetry, the language of passion, requires a heightened mode of expression which is supplied by metre which has the power of stimulating attention and raising speech from its commonplace prosaic level to an ideal one —exquisite, beautiful and sweet.

Metre being regulated rhythm, is excellently adapted as a means of poetic expression Different metres are suitable for different emotions, as different synonyms of the same object or idea are appropriate for different sentiments.

Rhyme is the second great means of expressing emotion, but it may or may not be used in dramatic or epic poetry.

Lyrical poetry takes advantage of rhyme and those

that are intended to be sung, as the very name implies, are set to music, which raises the composition to the highest pinnacle of beauty and perfection.

Another important feature of lyrical poetry is the subjectivity of the poet, as contrasted with the objective mood of the dramatic or epic poet. This subjectivity in ordinary lyrical poetry is concerned with the joys, sorrows, hopes, fears and speculations of his own mind or those attributed to the hero or heroine of his creation.

The Great Lyric

When, however, this subjectivity transcends all worldly affairs, soars higher and higher in search of the Universal Soul with which the individual soul seeks communion, the strains of sorrow at the separation and the melodies of joy at the prospect of union give the composition a spiritual flavour which raises it much above the ordinary lyric into the region of the Great Lyric, to which class belong the sublime hymns of the Vedas and the Hebrew Psalms.

A competent critic has rightly observed: "Great Lyric is equal in importance to Great Dramas of Shakespeare, Aeschylus and Sophocles. The Great Lyric must be religious—it must, it would seem, be an outpouring of the soul not towards man but towards God, like that of the God intoxicated prophets and psalmists of scripture."*

We shall see presently that the songs of Vidyāpati and Caṇḍīdās possess all the attributes of first class lyrical Poetry in varying but considerable degrees, along with the attribute, namely religiousness, of the Great Lyric.

The theme of Caṇḍīdās and Vidyāpati

Their theme was the love of Kṛṣṇa, the Indian Apollo, and Rādhā. They composed songs on other subjects too; but on those about Kṛṣṇa-Rādhā their permanent fame rests.

* See Encyclopædia Britannica (article Poetry).

In describing these love scenes they have philosophically analysed love and have described its different stages and phases

Some of the songs, according to modern taste, are gross and indecent to a superficial reader, but they have their inner meanings.

Dr. Grierson observes on this point:—"I have grouped the songs in classes according to the subjects of which they treat; one class, for instance, treating of the first yearnings of the soul after God, another of the estrangement of the soul, and so on To understand the allegory it may be taken as a general rule that Rādhā represents the soul, the messenger or dūti, the evangelist or else the mediator, and Kṛṣṇa, of course, the Deity The glowing stanzas of Vidyāpati are read by the devout Hindu with as little of the baser part of human sensuousness as the songs of Solomon are by the Christian priest They (Vidyapati's poems) became great favourites of the more modern Vaiṣṇava reformer of Bengal—Caitanya—and through him, songs purporting to be by Vidyāpati have become as well known in the Bengali household as the Bible in an English one"

Excellence of Vidyāpati

Vidyāpati is a master artist with a sonorous language at his command and also armed with all the implements of an accomplished scholar His imagination is highly creative—creative of beautiful creatures throbbing with life Hissongs, while pleasing the ear with their ambrosial music, calls before the mind's eye beautiful, vivid and life-like scenery of hallowed Vṛndāvana with Rādhā Kṛṣṇa and all their companions, in colours so bold, nicely matched and bright, that the images seem to move like creatures in flesh and blood.

According to Hindu rhetoric there are nine sentiments or Rasas, namely, amatory, pathetic, heroic, detestable, terrible, placid, comic, fearful and marvellous Of

these nearly all are found in epic and dramatic poetry. In the lyrical poems of Caṇḍīdās and Vidyāpati the amatory sentiment is the principal one with a prominent share of the comic, pathetic and placid, the two last named being intimately connected with the spiritual nature of the theme.

The amatory sentiment is sub-divided into three phases, the dawn (pūrvarāga), estrangement or separation (virahā) and union (milana).

Estrangement, in its turn, can be analysed into ten stages, beginning with longing (abhilāṣa) and culminating in death (maraṇa). Vidyāpati has given us exquisite pictures of Rādhā under these different moods and stages with such consummate master strokes, that we can almost see, for example her breaking the string of her necklace of pearls on her way home after taking a bath at the river, where he caught the first sight of Kṛṣṇa, and stealing a glance at Kṛṣṇa, while her companions are engaged in picking up the scattered pearls! With equal vividness can you visualize Rādhā at her death-bed bewailing the separation from Kṛṣṇa, and the burden of the song, 'mariba mariba sakhi nicaya mariba' not only rings in our ears with all the concreteness of physical sound but also penetrates into our hearts and melts our eyes to tears!

Vidyāpati's songs are beautifully adorned with figures of speech, specially metaphors and similes, of the latter of which he is the second master after Kālidāsa, according to Dr. Sen. Any number of them will be found in his songs, like bright jewels set at appropriate places.

In beauty of form and expression, in depicting natural scenery, in harmonious blending of colours, in passion and sensuousness very few poets have approached Vidyāpati and fewer still have excelled him in brilliance!

Excellence of Caṇḍīdās:

The first quality of his poems that strikes the reader is the simplicity and clarity of the language. There is

hardly any big uncommon or difficult word Though figures of speech are not wanting, yet there is no conscious attempt at decoration. This simplicity seems to be shrouded with a mysticism which obscures the meaning in some cases. But if the principles of the Sahaja cult and the spiritual relation of Rādhā and Kṛṣṇa be kept in view, the obscurity gives place to perspicuity. This simplicity of expression is consistent with the simple life and natural surroundings of the poet.

The next element of importance is the depth of passion evinced in his writings. R. C Dutt says: "He feels deeply and sings feelingly." The poet was of an emotional temperament with an inclination towards meditation. He has described all the phases of love, the various moods and their subtleties with natural fidelity and intense emotion

Though not so richly adorned as those of Vidyāpati, yet the pictures of Caṇḍīdās are as life-like and as impressive in their simple natural settings Those of Vidyāpati are like colour-paintings glazed and richly framed, while those of Caṇḍīdās are like uncoloured photographs in which the natural background is harmoniously blended with the natural effects of the different sentiments on the physiognomy of the characters, and the whole delineated with wonderful impressiveness. The external garb of sensuousness is of lesser importance to him than the internal vital and emotional forces.

Yet the crowning glory of Caṇḍīdās' songs is the spiritual aspect of the apparently temporal incidents and actions. In describing the dawn of love (pūrvarāga) Rādhā appears even to the most casual and superficial reader much higher and more spiritual than perhaps the most perfect heroine of human love-stories. Rādhā hears the name of Kṛṣṇa, it penetrates into her heart through her

eat and speaks her. She repeats the name, cannot describe the degree of sweetness in it, the lips cannot cease uttering the name. Repetition of the name, like saying the prayer, captivates her and she is completely overpowered with the desire of getting Kriṣṇa [1]

Falling in love with anybody on hearing his or her name is an affair not known to the code of human love. But if the name can even partially arouse associations, though dimly due to distance in time and space, which suggest something pleasant in the past, there is no reason why the heart won't respond to the hitherto known stimuli though the intellect may fail to grasp the situation and assign any reason The individual soul which enjoyed communion with the Universal Soul in the past and experienced beatitude, is now estranged and encased in this gross body which has imprisoned it and kept it in ignorance and darkness By some good luck, the name of the Saviour is carried into the prison, and the soul, enveloped in darkness as it is, recollects something distant, indistinct and nearly forgotten. By intuition it beats against the prison-wall and is ready to rush out in search of the Unknown!

This note of spirituality which is struck in the very first song runs through all his songs and poems as the keynote.

His songs exhibit childlike simplicity and faith with godlike wisdom There is sweet melody for the ear, beautiful and sublime associations for the imagination, lofty thoughts for the mind, deep and sincere feeling for the heart and heavenly light for the soul. In fact, when reading them we transcend all worldly desires and anxieties, and, with a heart full of devotion and reverence to

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[1] साधु, कहा सुनाइ स्याम नाम।
कानेंहि बिनहि पिया मानो पवित्र गो साधुन करिह मोह काम॥
ग २।

Hum, rise to higher spheres of endless music and beautiful imagery—becoming as we tread on better bear, one with the soul of Candīdās.

The poet's conception of love is so sublime and so much saturated with the nobler emotions that its magnitude, depth and different manifestations would have been confined to the ideal plane of imagination only, had not Śrikrṣṇa-Caitanya in his life answered to Candīdās' Rādhā in every detail. Divine Love assumed human form on this earth in the person of Śrikrṣṇa Caitanya, as conceived by the seer Candīdās a century before his advent.[1]

Specimens of their songs.

It is possible to convince a non-Bengali person of the deliciousness of the luscious Rasagulā and the celestial Sandes. There being no language bar, the things may be tasted in the original. Those who have once tasted these certainly owe unswerving allegiance to them. We are quite confident that the songs of Vidyāpati and Candīdās would have been equally liked by all had there been any possibility of removing the language bar.

No amount of writing about them can really help towards an appreciation of their beauties. Translation is the only way. We are unwilling to conclude these desultory remarks about the great poets without attempting a metrical translation of a few of their songs.

However defective the translation may be in metre and rhyme, it may give some idea of the original.

Candīdās sang many songs on the surprises of love (অনুরাগ) of which this is one:—

> I saw a happy lake of love,
> Myself in it did cast,
> After bath I stood and felt,
> The chill of sorrow's blast.

[1] For details see Dr. Sen's Bangabhāṣā-o Sāhitya.

But who made this curious lake,
With water seeming clear
Sharks of sorrow numerous prowl,
My heart trembles with fear!
Elders rebuke the slippery moss,
Neighbours fish with sharp sting;
Family name the water fruit,
With thistling thorns bristling!
Scandal duckweed and the water
Sins and throat which doth smart
Even when strained, weal did I seek
Pain decreed sorrow's dart!
Says Candidās "Hear, charming one,
Weal and woe be brothers twin;
To her whoever loves for weal
The other access win"!

[चिरीति सुखेर सायर दखिया नाहिते नाहिल॥ तथ।
नाहिया उठिया, पिंहिया चाहिले आगिल दुखेर नाग ह
कें वा निर्मिल प्रेम सरोवर निरमल तार नीर।
दुखेर मकर फिरे निरन्तर प्राण करे वेकरार॥
गुरुजन ठनाठन, ऊलेर ठि:ठना, पड़शी जीवन काटे।
कुल पानीफल काँटा दे सकल लखिते देखिया फाटे॥
॥ कहु पानाय, सुन। ॥ ग नाग खुंकिया खाइल यदि।
भलाय काहिरे कहु कहु करे, सुखे दुख दिल विधि॥
कहे चण्डीदास सुन रामीदिनी, सुख दुख दुटी भाई।
सुखेर लागिया ये करे पिरीति दुख याय तार ठाँइ॥]

Candidās brings home to his hearers universal truths with his homely similes and metaphors. The language is simple, the thought is deep and the feeling intense.

Let us turn to Vidyāpati. Rādhā is pining owing to her separation from Krṣṇa whose return to Vṛndāvana is no longer hoped for by anyone. Rādhā has arrived at a stage in which she is no longer able to bear the pangs of

separation. She is on her death-bed giving instructions to her maids for the disposal of her corpse.

"Die I must, O maidens, death do I find,
Rare jewel like dear Kāna how to leave behind?
At moment last maidens keep close to me,
Write Kṛṣṇa's sweet name all over the body
Lalitā my dear chum utter thou the spell
Near lifeless Rādhā's ear Kṛṣṇa's name do tell
Burn not Rādhā's corpse nor in water cast,
Keep on a tamāl branch tied to it fast,
If chance to Vṛindāvana my lover bring
The body dead with touch to life will spring.
But if the moonlike face of him again
be out of sight,
Consign shall I this frame to flame
of separation alight,
Vidyāpati says, "Hear me, charming madam
Keep hope in heart, Murari's sure to come."

सखि अहिअ जनि जनि बिचअ सखि ।
कानु हेन धुअ किअि अअरे दिअे पअ ?
लोअरा अनेक लखि देअो मकु रहे ।
मरणकाले कृष्ण नाम लिखो मम चहे ॥
कहिले प्रायोर सखि कान्त दिअो कान ।
मरा देह पाइ जेन कृष्ण नाम सुने ॥
मरोमुहाअे राधा जइ ना भरसाइआ अले ।
तरिले तुलिआ रेखो तमालेर डाले ॥
सहज जल ल सरु कृष्ण नहीं हन ।
जाविक तनु मोर नाहे जनु रन ॥
कअइ लो बिआ यदि आअे वृन्दावने ।
पलका बसन हम दिआ एहाने ॥
पुन यदि चाद मुख देखने ना पाअ ।
विरह अनल जाइ तनु तेजअिब ॥
भणहे विद्यापति शुन अनआरी ।
धैरज धर चित मिलअ मुरारि ॥

Rādhā knows full well that her end is drawing near. The frail human frame is too weak, and by this time, too exhausted to withstand the pangs of separation. She is not sorry to die, but she is anxious to preserve the corpse in the hope that, should Kṛṣṇa come to Vṛndāvana by chance, a single touch is sure to revive her. But if after this there be another separation she would even immolate herself in the flame of separation without any further chance of revival. Vidyāpati consoles her with an assurance that Kṛṣṇa is sure to come. Yes, the sage-like poet proclaims the truth that God is sure to come to the person who actually feels the separation!

No commentaries can sufficiently bring home to the reader the many points of excellence in this song, whose deep pathos and staunch belief in the divine nature of Kṛṣṇa have not failed to draw furtive tears from those who hear it properly sung by one who shares the belief and sentiments of Vidyāpati.

One is rather unwilling to leave this beautiful paradise of Caṇḍīdās and Vidyāpati's creation, but limit of space compels us to be satisfied with the above two songs only for the present.

The fullest enjoyment and appreciation of these poets require some acquaintance with the language, a little knowledge of the Rādhā-Kṛṣṇa story with its spiritual significance, and an interpreter, animated at least partly, with the same faith and sentiments as the poets and able to sing these songs properly.

The above translation cannot show all the beauties, as a jug of water from the Ganges cannot show the majesty and beauty of the sacred stream.

Yet an attempt like the present, it is hoped, will not be taken by the charitable reader as an arrogance for the

motive behind is as selfless and sacred as that of the pilgrim who brings from Benares a little Ganges water to be distributed among his friends and acquaintances, who sprinkle a few drops over their heads to expiate themselves from sin, and this sacred touch kindles in some a desire to undertake the pilgrimage for an ablution in the sacred stream itself.

Similarly, it is hoped, the taste, even through a faulty translation, of a few drops may provoke in some readers a genuine thirst for the ambrosial fluid that flowed from the devotional emotion of Vidyāpati and Caṇḍīdās.

B. M. GHOSAL

THE PROBLEM OF OUR EDUCATION

When some twenty-five years ago, the cry of national education was first raised, and a movement was started to establish national schools and colleges in Bengal, the Bengalee people became enthusiastic over the idea, whereas the rest of India viewed it with a good deal of suspicion and fear

It cannot and need not be denied that the originators of the movement were largely actuated by political motives, because they felt that in order to preserve education in our country it was necessary to take it into our own hands. But although the movement was born of the political passions roused by the Partition of Bengal, it had a deeper spiritual urge behind it. There was a large number of people in Bengal, all products of the Calcutta University, who had lost their earlier faith in the virtue of the education imparted by the official university. The political circumstances of the country only gave shape and form to this vague but widespread feeling and made people suddenly realise that the official universities are in reality huge machines for the mass production of intellectual and moral mediocrity, and the method they have adopted is the method of standardising the so-called educated people of India. And in the result the educated mind of India is clearly an immature mind. The cry for national education is to my mind the cry for some sort of education whose object is to bring out and fructify all our vital capacities and thereby build up the nation from within

The word national is both ambiguous and vague; and naturally national education meant some form of

education which is not totally foreign. We were in no way hostile to the new ideas and new knowledge which modern Europe has given to us, on the other hand, we were fully aware of the life-giving quality of the new knowledge. We were conscious of the fact that in these days nobody can be called properly educated who is not familiar with the methods and teachings of modern science, moreover, a people devoid of scientific culture is bound to be economically and politically dominated by races who are trained in the methods of Western science. But at the same time all of us were for reviving our national culture. There is something deep down in our nature which has an elective affinity with that culture, and which is in no way antagonistic to scientific truths. So the problem before us was how to engraft modern scientific culture on an ancient culture We could not hit upon any simple and satisfactory method of solving the problem and ultimately decided upon making the experiment of combining the two and wait for the result. Now everybody knows that in the result our national council of education has become a merely technological institute. The claims of the life are much more insistent than those of the spirit.

I believe the same problem confronts the Hindu University to-day and we hope the newer and bigger institution will succeed where we have failed, in amalgamating the scientific culture of the West with our dying Hindu culture, which undoubtedly is one of the finest cultures of the world

If the Hindu University succeeds in reviving Hindu culture by modernising it, Pandit Madan Mohan Malavya's name will go down to posterity as one of the greatest benefactors of our people

PRAMATHA CHAUDHURI

बाल-विज्ञान

आयुः कर्म च वित्तं च विद्या निधनमेव च ।
पञ्चैतानि हि सृज्यन्ते गर्भस्थस्यैव देहिनः ॥

अर्थात् जब प्राणी गर्भ ही में रहता है तभी उसके भावी जीवन की सब आवश्यक बातों की, अर्थात् आयुष्य, कर्म, धन, विद्या, मृत्यु आदि की सृष्टि हो जाती है। यह पुराना श्लोक है और प्रारब्ध-कर्म-फल-भोग के सिद्धान्त का पोषक है। यदि इसके भाव को अक्षरशः हम वैसा कट्टरपने के साथ ग्रहण करें जिससे कि कुछ लोग ग्रहण करते हैं तो हमें उपाय करने की आवश्यकता ही नहीं, हाथ पर हाथ रखकर बैठना ही हमारे लिए उचित होगा, क्योंकि जब सभी बातों का निश्चय पहले ही से हो गया तो उपाय करने ही से क्या लाभ? परन्तु यदि हम भर्तृहरिजी के इस वाक्य का पालन करें कि—

"शकटीचक्रवद्गच्छेत् भाग्योद्योगौ हि कर्मणः ।
एकेनैव तु चक्रेण शकटी सन्तुलयते ॥

अर्थात् "कर्मरूपी गाड़ी के दोनों पहिए भाग्य और उद्योग हैं, जैसे एक पहिए से गाड़ी नहीं चल सकती, उसी प्रकार भाग्य और उद्योग में से एक ही का अवलम्बन भी विनाशात्मक होता है"—तो हमें उपाय करने का भी अवसर मिल सकता है। यह सिद्धान्त ग्रहण करने पर पूर्वोक्त श्लोक का भाव इस प्रकार लिया जा सकता है—

हमारे हिन्दू-शास्त्रों के अनुसार और पाश्चात्य प्राणिविद्या के अनुसार माता-पिता के गुण-अवगुण सन्तान में आते हैं, अनुतः पिता ही है जो रूपान्तर से पुत्ररूप होकर प्रकट होता है—"पिता वै जायते पुत्रः।" शारीरिक और मानसिक स्वास्थ्य, स्फूर्ति, प्रतिभा, संग्रह-शक्ति आदि जितने गुण माता पिता में विद्यमान हैं, उनका प्रभाव सन्तति पर अवश्य ही पड़ता है; या यों कहिए कि इन गुणों को एक मोटी सी सीमा

नियत है। अब विरोध-रूप प्रश्न यह है कि क्या उस सीमा से आगे पीछे हटना सम्भव नहीं। जो लोग इसे असम्भव समझते हैं उन्हें मैत्रा ही प्रतीत होता होगा; हमारा निश्चय तो यह है कि उस सीमा से आगे पीछे हटना सम्भव है। एक ही दुकान की एक ही तरह की घड़ी दो घड़िवों दो गाहकों के पास जाती हैं। एक तो अपनी घड़ी यथासम्भव कूटता है, उसे मिट्टी गर्द से बचाता है, समय समय पर उसमें तेल डालता है, सफाई करता है, गिरने नहीं देता, और 'गारन्टी' से अधिक समय तक उसका उपयोग करता है। दूसरा गाहक अपनी घड़ी इधर-उधर फेंक देता है, कसकर कूक देता है, मन्दिर रखता है, और उसके बिगड़ जाने पर 'गारन्टी' के नाम से दुकानदार पर दोषारोपण करता है। घटिका-निर्माता ने दोनों घड़ियों का 'भाव' बराबर बनाया था, परन्तु एक ने 'उपाय' के बल से दूसरे की अपेक्षा अधिक लाभ उठाया।

वस्तुतः प्राकृतिक शक्ति और परिस्थिति दोनों का प्रभाव मनुष्य पर पड़ता है। किसका प्रभाव अधिक पड़ता है इसमें मतभेद है। कुछ सिद्धान्तवादियों ने 'भाग्य' का वामन इतना कहकर पकड़ा कि दूसरे किसी बात पर ध्यान ही न दिया। भाग्यवादियों का आलोचना करते हुए तुलसीदासजी ने लक्ष्मणजी के मुँह से कहलाया—

"काहर मन कर एक अधारा। दैव दैव आलसी पुकारा"॥

विपरीत इसके कुछ लोगों का सिद्धान्त है कि—

उद्योगिनं पुरुषसिंहमुपैति लक्ष्मीः, दैवेन देयमिति कापुरुषा वदन्ति।
दैवं निहत्य कुरु साहसमात्मशक्त्या, यत्ने कृते यदि न सिध्यति कोऽत्र दोषः॥

हर्बर्ट के समान कुछ मनचले पाश्चात्य आचार्यों ने यहाँ तक कह डाला कि उत्पत्ति के समय सब शिशु बिलकुल बराबर होते हैं, और परिस्थिति ही उनके भावी जीवन का निर्णय करती है। पाश्चात्य मनोविज्ञान की आधुनिक धारणा प्रायः हर्बर्ट के सिद्धान्त से मिलती-जुलती है। इस लेख में अधिक अवकाश न होने के कारण दोनों मतों की पूर्ण मीमांसा नहीं हो सकती। हमारी स्थिति दोनों सिद्धान्तों

के बीच में है, अर्थात् हमारे भारत पर है कि जब बच्चा पैदा होता है तो माता-पिता से गुण-दोषों का प्रभाव बीजरूप में अपने शरीर में रखता है। अनेक प्रकार की शक्तियाँ उसमें उसी तरह सूक्ष्मरूप में गुप्त रहती हैं जैसे वट-बीज में आगामी वृहद्वृक्ष के सम्पूर्ण अवयव छिपे रहते हैं। परन्तु इन शक्तियों का विकास परिस्थिति पर अवलम्बित है। आम वृक्ष बनारस में होता है, हिमालय पर क्यों नहीं होता? नारियल उड़ीसा में होता है, लखनऊ में क्यों नहीं होता? सेब काश्मीर में होता है, प्रयाग में क्यों नहीं होता? यह सब परिस्थिति का परिणाम है। कवियों ने सरसों और कुसुम पर तोते के घोंसे लिख डाले हैं, सेर सब क्या है? परिस्थिति ही का प्रभाव है।

यदि परिस्थिति का प्रभाव इतना प्रबल न होता तो शिक्षा का कोई अर्थ ही न होता। शिक्षा की परिभाषा अनेक आचार्यों ने अनेक प्रकार से की है; सहज शिक्षा के अनुसार शिक्षा वह क्रिया है जिसके द्वारा परिस्थिति से अधिक से अधिक लाभ उठाया जा सके। कल्पना कीजिए कि पानी की एक छोटी सी धारा कहीं से आ रही है, वह जिधर स्थान पायेगी उधर ही बह निकलेगी, कभी वह तालाब में गिरेगी, या अन्य किसी प्रकार अपना अन्त कर देगी। परन्तु यदि वह किनारे के द्वारा पहुँचेगी तो नल के द्वारा या नाली के द्वारा ऐसे खेत में पहुँचाई जायेगी जहाँ फल खड़े हैं। इसी प्रकार मनुष्य की प्राकृतिक शक्ति यथासमय अपना प्रादुर्भाव दिखायेगी, यदि वह सुमार्ग पर ले जाकर उनसे कोई लाभकारी काम लिया गया तो शिक्षा हुई, यदि उसे कुमार्ग में जाने दिया गया तो उस व्यक्ति-विशेष की हानि हुई और साथ ही समाज को हानि हुई। एक उदाहरण लीजिए। समाज की दृष्टि से चोरी करना पाप है, परन्तु क्या कोई यह कह सकता है कि चोरी के लिए विशेष शक्तियों के विकास की आवश्यकता नहीं? चोर की दृष्टि तेज होनी चाहिए, अवयव-शक्ति प्रबल होनी चाहिए, सर्दी गर्मी आदि सहने की शक्ति होनी चाहिए, शरीर में बल तथा मन में साहस होना चाहिए, परिश्रम की शक्ति होनी चाहिए, और कूदने, उछलने, दौड़ने युद्ध करने आदि का अभ्यास होना

चाहिए, अथवा अपने साथियों के लिए प्राणोत्सर्ग तक करने को हिम्मत होनी चाहिए। हम पूछ सकते हैं कि उपर्युक्त गुणों में से कौन सा गुण हेय है। इसका एक ही उत्तर हो सकता है कि ये सब गुण वरदान हैं, परन्तु चोर इनका उपयोग दुष्कर्म में करता है इसलिए उसमें सब हेय हो जाते हैं। किसी सेनापति में ये ही गुण अत्यन्त श्लाघ्य समझे जाते हैं।

यदि बड़ी व्यक्ति जो आज चोर कहलाता है बचपन में सुधरा पाता और ये ही गुण सीखता जो उसने चोरी के लिए सीखे तो आज बड़ा व्यक्ति आदर का पात्र होता, उसकी शक्ति "परेषां परिपीडनाय" न होकर "रक्षणाय" होती। उसमें प्राकृतिक शक्ति का बीज था, उसका विकास हुआ, परन्तु कोई मार्गदर्शक न था, इसलिए उस शक्ति से उसने चोरी का काम लिया, यदि समुचित शिक्षा होती तो उसी शक्ति के विकास से बड़ा व्यक्ति समाज का भूषण होता। हमारा तात्पर्य यह है कि उचित शिक्षा से प्राकृतिक शक्तियों का विकास कराया जाता है तो धर्म, समाज आदि का कल्याण होता है। अतः मनुष्य के लिए शिक्षा की अत्यन्त आवश्यकता है।

'शिक्षा' शब्द एक भ्रामक शब्द है। कोई लोग समझते हैं कि बच्चों को पाठशाला भेजना, उनका वहाँ किताब पढ़ लेना या अपना नाम लिख लेना सिखाना ही शिक्षा है। हम कहेंगे कि यह सब काम तो शिक्षा का एक छोटा सा अङ्ग है। अकबर बादशाह निरक्षर था, तथापि वह अशिक्षित नहीं था। शिक्षा का सबसे अच्छा अर्थ तो यह होना चाहिए कि शिक्षित व्यक्ति की समस्त शक्तियों का विकास सरल से सरल रीति से इस प्रकार हो कि उनसे समाज का अधिक से अधिक कल्याण हो।

अब हमें देखना है कि मनुष्य की शिक्षा कब से प्रारम्भ होती है, उसका भार किस पर होता है। हिन्दू शास्त्रों के अनुशीलन से पता चलेगा कि जब प्राणी गर्भ में ही रहता है तब उसकी माता के देखने,

सुनने, विचारने का प्रभाव प्राणी पर पड़ता है, अतः आयुर्वेद में तथा पुराणों में विशेष विधि बतलाई गई है कि गर्भिणी को कैसा कैसा बनाये रखना चाहिये। उदाहरणार्थ महाभारत में विदुला और उसके पुत्र का संवाद दिया है। उसकी महिमा यों कही गई है—

इदं पुंसवनं देव वीराजननमेव च।
अतीव गर्भिणी लुप्ता भूत्वा वीर प्रजायते॥
पितापुत्रं तथा पुत्रं दानशूरं तपस्विनम्।
साधुवृत्तं प्रियं दीप्तमग्निवाहं च सत्यवाक्॥
अर्चिष्मन्तं बलोपेतं महाभाग्यं महाबलम्।
धृतिमन्तमनाधृष्यं शैलारण्यपरायणम्॥
नियन्तारं प्रसाधूनां गोप्तारं धर्मदारिणाम्।
ईदृशं जनिता पुत्रं वीर सत्यपराक्रमम्॥

वीर बालक अभिमन्यु ने चक्रव्यूह-भेदन की कथा मातृ-कुक्षि-स्थित होकर सुनी थी, उसका प्रभाव महाभारत युद्ध में दिखलाई दिया।

उत्पत्ति के पश्चात् तथा कुछ दिनों तक माता ही के साथ रहता है, और जैसी शिक्षा माता उस समय दे सकती है उसका बड़ा गहरा संस्कार होता है। पिता, भाई, बहन, कुटुम्बी, सम्बन्धी, पड़ोसी, नौकर-चाकर—सभी का सम्पर्क बालक को होता है और सभी उसके आदिगुरु बनते हैं। बच्चों को कथा बड़ा कहा गया है, घर पर जैसा रङ्ग पहले चढ़ जाता है वह स्थायी हो जाता है। उन्हें अनुकरण करने की शक्ति ऐसी प्रबल होती है कि भला बुरा जो कुछ भी वे देखते सुनते हैं उसे शिक्षारूप से ग्रहण कर लेते हैं। उन्हें अच्छे बुरे में विवेक करने की शक्ति उस समय नहीं होती, उन्हें उस समय जो जो इन्द्रिय-रुचिकर होता है वही सर्वस्व तथा प्राप्त प्रतीत होता है। ऐसी दशा में यदि उचित शिक्षा न हुई तो उसका जीवन सदा के लिए नष्ट हो जाता है। यदि माता-पिता को उचित शिक्षा देने के योग्य हम मान भी लें तो भी उन्हें इतना अवकाश कहाँ कि अपने बच्चों का ठेल-ठेल रात दिन वे रख सकें। उन्हें विवश होकर अपने अपने किसी ऐसे व्यक्ति

को सौंप देते थे जो उन पर दृष्टि रक्खे, उन्हें रोने न दे, उनकी रक्षा रक्खे, उनको खिलाने—खिलाने से मतलब भोजन देने से नहीं, किन्तु खेल कराने से है। इस निबन्ध का शीर्षक "बाल खिलावन" हमने इसी अर्थ में रक्खा है। बाल-खिलावन का महत्त्व बहुत बड़ा है, जैसा कि हम आगे देखेंगे।

'खेलना' क्रिया का प्रेरणार्थक रूप 'खिलाना' या 'खेलाना' है। बालकों को खेल में लगाना, उनके साथ खेलना, और इत्तुद्वारा उन्हें आवश्यक शिक्षा देना बाल-खिलावन है। हम लोग किसी भी सांसारिक विषय में इतना प्रमाद नहीं करते जितना बाल-खिलावन में करते हैं। कुछ भाग्यशाली घरों की बात छोड़ दीजिए; हम साधारण जनता की दृष्टि से रखकर कह सकते हैं कि बच्चों का खेलाने के लिए प्रायः वही व्यक्ति चुना जाता है जो अन्य किसी कार्य के योग्य न हो। पिता को कचहरी जाना है, माता को 'गृह कारज नाना जंजाला है;' बड़ा भाई अपनी पढ़ाई में ध्यान है, छोटी बहन इस योग्य नहीं कि घर का कार्य कर सके, इसलिए कभी कभी बच्चे को रख लेती है। यदि कोई लँगड़े-लूले, अन्धे, कालसो, वृद्ध, रोटी के दास, दूर के कोई नातेदार मिल गये तो वह महान् कार्य उनके सिपुर्द कर दिया गया, मानो उनकी रोटियों का मूल्य इसी सेवा-द्वारा वसूल करने की चेष्टा की गई। ऐसे अशक्त व्यक्ति के अभाव में नौकर या नौकरानी पर यह भार रक्खा गया, सो भी नौकर ऐसा जो घर का अन्य कोई कार्य करने में समर्थ न हो। तात्पर्य यह है कि सबसे रद्दी, सबसे निकम्मे, सबसे सुस्त, सबसे गन्दे, और सबसे अशक्त व्यक्ति को यह महान् कार्य सौंपा जाता है। परिणाम यही होता है जो ऐसी दशा में होना चाहिए, अर्थात् बच्चा शरीर में, मन में, वर्ण में, समाज में, विद्या में, तथा अन्य सब आवश्यक बातों में उसी निकम्मे का अनुकरण करता है, उसी को सर्वथा-त्याज्य शिक्षा ग्रहण करता है, और दूषित संस्कारों से परिप्लावित होकर आगामी गुरुओं को आरम्भूत हो जाता है। इससे बड़ा प्रमाद और क्या हो सकता है?

लोग समझते हैं कि शिक्षा का स्थान स्कूल है। इसके मानने में हमें कोई आपत्ति नहीं। स्कूलों द्वारा बहुत कुछ किया जा सकता है; परन्तु यह तभी हो सकता है जब स्कूलों को अच्छी सामग्री मिले, अर्थात् ऐसे बच्चे मिलें जिन्हें प्राकृतिक शिक्षा ठीक मिली हो, जिनकी मानसिक वृत्तियाँ दूषित न हो गई हों। बाल-खिलावन को हम मकान की पहली मंजिल से तुलना कर सकते हैं, और स्कूली शिक्षा को दूसरी मंजिल से। जब पहली मंजिल सड़ी गला ईंटों और लोनेदार मिट्टी से, तथा घुनी हुई लकड़ी से बन गई तो उस पर की दूसरी मंजिल सुन्दर, दृढ़ और बाल-बोल कैसे हो सकती है? प्रथम संस्कारों का बुरीकरण एक कठिन समस्या है। इसलिए यदि बालकों को समुचित शिक्षा देनी है, यदि उनका जीवन सुधारना है, तो उनके खेलानेवाले चुन कर रखने चाहिएँ। हमारी धारणा तो यह है कि खेलानेवाले का महत्व अध्यापक से अधिक है। यदि छः वर्ष से पहले की अवस्था में खेल द्वारा अच्छी शिक्षा दी जा सके तो आगे का कार्य अत्यन्त सुगम हो जाय। पाश्चात्य विद्वानों और विदुषियों ने खेलाने का महत्व समझ कर किंडर-गार्टन और मांटेसोरी विधि की आयोजना की है। इन विधियों से खेल-द्वारा ही समुचित शिक्षा दी जाती है। परन्तु हमारे निर्धन देश में इन सबकी गुंजायश कहाँ? तथापि इन पाश्चात्य विधानों में कोई ऐसी दैवी शक्ति नहीं छिपी है जो हमारे अकिंचन भाइयों के लिए सर्वथा दुर्लभ हो। थोड़ा सा ध्यान देने पर और मनोविज्ञान के थोड़े से सिद्धान्त समझ लेने पर हमारा कर्त्तव्य इसको सफल हो सकता है। कुछ उदाहरणों द्वारा हम अपना भाव प्रकट करने की चेष्टा करते हैं।

जिस व्यक्ति पर बच्चों के खेलाने का भार दिया गया हो उसे अधोऽङ्कित सिद्धान्तों पर ध्यान देना चाहिए.—

(१) बच्चों की प्राकृतिक शक्ति ही उन्हें खेल के लिए प्रेरित करती है। इस स्वयं-सिद्ध प्रेरणा का जिक्र आचार्यों ने कई प्रकार से बतलाया है—

(क) शरीर के प्रत्येक अवयव का सम्बन्ध मस्तिष्क या पृष्ठ-वंश के साथ दो प्रकार के स्नायु-तन्तुओं द्वारा होता है। जो स्नायु-तन्तु ज्ञानेन्द्रियों अर्थात् आँख, कान, नाक, जिह्वा और त्वचा द्वारा प्राप्त ज्ञान को मस्तिष्क तक ले जाते हैं उन्हें ज्ञान-तन्तु (Sensory Nerves) कहते हैं, और जो तन्तु मस्तिष्क की आज्ञा मांस-पेशियों एवं शरीर के अन्य अवयवों तक ले जाते हैं उन्हें आज्ञा-तन्तु (Motor Nerves) कहते हैं। वस्तुतः सम्पूर्ण शारीरिक कार्यों का सञ्चालन इन्हीं दोनों प्रकार के तन्तुओं के अधीन है। बचपन की बीमारी में ये ही तन्तु बेकाम हो जाते हैं जिससे न तो चुटकी काटने की पीड़ा का ज्ञान हो और न हाथ-पैर आदि स्वयं अंगों का संचालन हो सके।

साधारण कामों के लिए जितनी शक्ति की आवश्यकता है उससे अधिक शरीर में रहता है, विशेषतः बच्चों के शरीर में तो बहुत ही अधिक रहती है। उस शक्ति का व्यय होना भी आवश्यक है। बच्चों को वैसे काम तो करने नहीं होते जैसे तथाकथित धनोपार्जन के लिए करने होते हैं, अतः उनकी बची हुई शक्ति का व्यय खेल के द्वारा होता है। यदि बच्चे में खेल की उत्तेजना न हो तो समझना चाहिए कि उसमें शक्ति की बहुत बड़ी कमी है। उसका ठीक उपचार करना चाहिए।

शक्ति का व्यय इस प्रकार होता है कि ज्ञान-तन्तुओं के द्वारा जो कुछ भी ज्ञान मस्तिष्क को प्राप्त होता है उसके उत्तर में आज्ञावाहक तन्तु शरीर की भिन्न भिन्न मांसपेशियों को निरन्तर उत्तेजित करते रहते हैं जिससे हँसने, दौड़ने, पढ़ने, तोड़ने, नाचने, कूदने आदि कर्मों में वे मांसपेशियाँ लगी रहती हैं। जिस बच्चे से हाथ पैर न हुलाया जाता हो, जिसके मुँह में मक्खियाँ भनभनाता रहती हों, वह चाहे अपने माता-पिता की दृष्टि में भले ही सीधा और भला बच्चा माना जाता हो, मनोविज्ञानवेत्ता की दृष्टि में तो वह अधूरा ही है। पितृवात्सल्य बच्चा का आवश्यक भूषण है और खेल उसका आवश्यक कार्य है।

(ख) खेल में शक्ति का व्यय तो अवश्य होता है, परन्तु उस व्यय को हानि नहीं कह सकते। उसी व्यय के द्वारा सच्ची शिक्षा मिलती

है। सांसारिकों के ठीक ठीक संचालन के बिना सांसारिक वस्तुओं का यथार्थ परिचय नहीं प्राप्त होता। यदि परिचय प्राप्ति ही शिक्षा का लक्ष्य होता तो इतने ही से काम चल जाता। परन्तु बच्चों को इससे भी एक दर्जा और आगे बढ़ना होता है। उन्हें प्रत्येक परिचय का कुछ न कुछ उत्तर देना होता है, उस पर अपना अनोखा भाव प्रकट करना होता है। भाव का प्रकट करना ही जीवन है; बच्चों के लिए यही खेल है। इसलिए बच्चों के खेल को वैसी सम्पत्ति समझना चाहिए।

(२) बच्चों की प्राकृतिक शक्ति अनेक रूपों में आविर्भूत होती है। अनुकरण करना, प्रेम करना, बुद्धा करना, लड़ना, विविध वस्तुओं को तोड़ने फोड़ने तथा उन्हें फिर से बनाने की चेष्टा करना, विविध विषयों की जिज्ञासा रखना, दूसरों के बराबर गर्दन उठाना तथा उनसे आगे बढ़ जाने की चेष्टा करना, सम्पत्ति रखने तथा स्वामी बनने का स्पृहा रखना आदि अनेक रूप हैं जिनमें प्राकृतिक शक्ति प्रकट होती है। परन्तु शक्ति-विकास के सब रूप एक साथ नहीं आते, किसी का आविर्भाव पहले होता है किसी का पीछे, किसी का और भी पीछे। जिस रूप में किसी शक्ति का आविर्भाव हो रहा हो उसी के अनुकूल साधनों का उपस्थित करना अत्यन्त आवश्यक है। बच्चा उस समय वैसी ही सामग्री चाहता है, और यद्यपि उसके अभाव में अन्य वस्तुओं से काम चलाने की चेष्टा करता है, तथापि बिना उचित साधनों के शिक्षा अधूरी रह जाती है। बड़ी कठिनाई तो यह है कि किसी भी शक्ति के आविर्भाव तथा विकास का समय क्या तुला नहीं रहता है, यह बात नहीं है कि जब जो विषय चाहा सिखा सकेंगे, यदि आविर्भाव का समय कोरा निकल जायेगा तो फिर बच्चे को उस विषय से सदा के लिए हाथ धोना पड़ेगा। हाँ, यह हो सकता है कि आविर्भाव के समय उचित सामग्री देकर कुछ परिचय तथा ज्ञान और अभ्यास तैयार कर लिया जाये, तब उस विषय की जिज्ञासा पीछे तक बनी रहेगी और उसका विकास पीछे भी हो सकेगा।

(३) शक्ति के सदुपयोग और दुरुपयोग ही से अपना भला या बुरा बनता है। शक्ति तो प्राकृतिक है, उसकी धारा

तो बढ़ेगी ही ; उसे या तो उचित मार्ग द्वारा ले जाकर उपजाऊ भूमि के सींचने में ला सकते हैं, या उसे कुएँ में बहा सकते हैं या उससे गर्त गिरा सकते हैं। वह धारा रुकेगी नहीं, कहीं न कहीं जायेगी और कोई न कोई कार्य करेगी। अच्छे अभिभावकों, अच्छे खेलाने वालों और अच्छे अध्यापकों का कार्य यही है कि उस प्राकृतिक शक्ति को अच्छे काम में लगा दें, उसे बुरे मार्ग पर न जाने दें। जितने सद्गुण हैं सब खेल ही खेल में सिखाये जा सकते हैं। महामना पूज्य श्री पंडित मदनमोहन मालवीय सरीखे महापुरुषों के बाल्यकाल में किसी सच्चरित्र उदारहृदय शिक्षक ने उन्हें खेलाने का गौरव प्राप्त किया होगा।

मुझे भय है कि उपर्युक्त वैज्ञानिक विषय लिखने में रूखापन आ गया है, वह सरस नहीं हो सका; अतः निबन्ध-समाप्ति से प्रथम कुछ व्यावहारिक उदाहरण देने की चेष्टा करता हूँ।

(१) बच्चों में क्रियाशीलता इतनी अधिक होती है कि जिस क्रिया में अधिक कार्य की सम्भावना होती है वही कार्य वे अधिक पसन्द करते हैं। किसी बच्चे को बुलाइए कि पुत्तू इधर आओ, लल्लू इधर पास आओ, लल्लू, ज़रा सुन तो, तो प्रायः वह नहीं आयेगा, पीछे हटेगा, दूर भागेगा, या खड़ा खड़ा हँसता रहेगा। परन्तु उससे कहिए कि वह पट्टा उठा कर मुझे दे दो, वह लोटा मेरे पास रख दो, तो तुरन्त ही वह आज्ञा का पालन करेगा।

(२) बच्चों में लज्जा भी होती है, परन्तु वह जिज्ञासा से हार जाती है। बाहर से आकर आप बच्चे को पुकारते हैं तो वह अति शीघ्र कपड़े से उतर आता है, परन्तु आड़ में खड़ा होकर बार बार झाँकता है और मुस्कराता है, पास नहीं आता। उस समय यदि आप कह दें कि देखो मेरे हाथ में स्याही कहाँ से लग गई या इस फूल ने कितनी पँखुड़ियाँ हैं, तो वह एकदम आपके पास चला आयेगा। ऐसी दशा में आपको झूठ न बोलना चाहिए, किसी सच्चे विषय की ओर उसे आकृष्ट करना चाहिए।

(३) भवभूति ने लिखा है कि "रजनकण हि दुःखानामेव विश्रद्धाराविर्भावप्रणयवती", अर्थात् अपने सगे के सामने दुःख का दरवाज़ा खुल जाता है। यह बात बच्चों पर बहुत घटती है। यदि कोई बच्चा गिर पड़ता है, या उसको उँगली कटा कुचल जाती है तो लाचार होकर वह इधर-उधर देखता है। अगर आप उँह दूसरी ओर फेर कर यह प्रकट करें कि आपने यह घटना नहीं देखी तो बच्चा चुपचाप उठकर चला जाता है या दूसरे काम में लग जाता है। परन्तु यदि आप सहानुभूति दिखाने के लिए उसके प्रश्न करने लगते हैं या उधर दौड़ते हैं तो वह अवश्य रोने लगता है। अधिक चोट लग जाने पर यह बात नहीं होती, तब तो बच्चा अवश्य ही रोने लगता है।

(४) "शिशूनां रोदनं बलम्", अर्थात् बच्चों का एक-मात्र बल रोना है। रोदन दुःख, असहायता, और असामर्थ्य का सूचक है। सम्भव है कि डाँटने फटकारने से बच्चा चुप हो जावे, परन्तु वह उपाय एक रोग दूर करके उससे बड़ा दूसरा रोग पैदा करना है। बच्चा सहम जाता है तो उसकी विकासशील आत्मा संकुचित हो जाती है। दुःख का कारण दूर करना, बच्चे के मन में यह भाव पैदा करना कि तुम्हारा सामर्थ्य ही उसका सामर्थ्य है और वह असहाय नहीं है, ठीक उपाय है। उसका मन किसी रोचक विषय पर लगा देना दूसरा उपाय है।

(५) बच्चों में बदला लेने का भाव बड़ा प्रबल होता है। यदि बच्चा पृथ्वी पर गिर पड़े और आप पृथ्वी को पीटना आरम्भ करें, यह दिखलाते हुए कि हे पृथ्वि, तुमने मेरे बच्चे को गिराया तो मैं भी तुम्हें दण्ड देता हूँ, तो बच्चे को सन्तोष हो जाता है, और वह प्रसन्न होकर आपका अनुकरण करते हुए पृथ्वी को पीटने लगता है। यह बात कुछ देर तक तो उचित है क्योंकि सांसारिक जीवन में बदला लेने की आवश्यकता होती है, परन्तु इसका समर्थन सर्वदा नहीं करना चाहिए। या तो दण्डनीय वस्तु की दण्डनीयता प्रकट करनी चाहिए या बच्चे का दोष स्पष्ट प्रकट करना चाहिए। जैसे, किवाड़ को क्यों मारते हो, बेचारा निर्बल है, देखो भाग नहीं सकता, टूट जायेगा, जाने दो, अब तुम्हारी उँगली फिर कभी न कुचलेगा। या, किवाड़ का क्या दोष है, तुमने स्वयं उसमें उँगली डाली

तो, अब ऐसा आप कभी न करना। इन उपायों से दया का भाव बढ़ता है, तथा अपने दोषों के जानने की आदत पड़ती है, और बड़ा सचेत रहना सीखता है।

(६) एक अनुभवी डाक्टर ने "न करो" के सिद्धान्त का खण्डन किया है। उसका मत है कि बच्चों को निषेधात्मक आज्ञायें देना मानो उन्हें आज्ञा-भञ्जक बनाना है। 'यह घड़ी मत छुओ', 'ऐसे देखकर मत हँसो', 'किताब न फाड़ो', 'चारपाई पर से न कूदो' आदि आज्ञाओं का पालन बाल-स्वभाव के प्रतिकूल है। यदि बच्चों से ऐसी आज्ञाओं का पालन कराना है तो उन्हें दूसरे रूप में प्रकट करना चाहिए। इसके लिए दो ही बातें हो सकती हैं, या तो जिस बात का निषेध करना है उससे अधिक रोचक किसी बात पर बच्चे का ध्यान आकृष्ट किया जाय, जैसे घड़ी को हटाकर चाबीदार खिलौना दे दिया जाय, किताब फाड़ने के लिए फूल दे दिये जायें, या यदि बच्चे में पर्याप्त समझ आ गई है तो उस विशेष कर्म से हानि उसे समझा दी जाय, जैसे, घड़ी गिर पड़ेगी तो टूट जायगी, फिर खटखट नहीं करेगी, तब क्या सुनोगे, चारपाई पर से कूदने में तुम्हारे पैर में चोट लग सकती है, इधर कमाल पर कूदो, देखो कितना कूद सकते हो।

(७) बच्चों का काम है गिरना पड़ना, लोटना। इससे कपड़े बहुत गन्दे हो जाते हैं। साधारण स्थिति के कुटुम्ब के लिए अधिक कपड़े बनवाना असम्भव है, उधर बच्चे को गन्दा रखना भी बुरा है। परिणाम यह होता है कि या तो वह नंगा छोड़ दिया जाता है जिससे नालियों का गन्दा गुबार उस पर पड़ता है, या सदा गोद में रक्खा जाता है। सदा गोद में रखने से बच्चा निर्बल हो जाता है, एक तो उसके हाथ-पैर नहीं चलते, दूसरे सवाने आदमी का निरन्तर, वजनी, शारीरिक उष्णता बच्चे पर बुरा प्रभाव डालती है इसी तरह सूखा रोग हो जाता है। बच्चे को सदा एक ही ओर गोद में रखने से उसके शरीर का जो भाग दबता है वह निर्बल हो जाता है।

(८) संसार में किसी का भी सभी इच्छाओं की पूर्ति नहीं हो सकती, सबको मन मारना पड़ता है, हानि सहन करना पड़ता है। यदि ऐसी

साहस-शक्ति खेल में पैदा की जाय तो सचालेपन में इतना कष्ट न उठाना पड़े। खिलौना टूट जाने पर क्या दुःखी होगा, परन्तु तुरन्त ही दूसरा खिलौना न दे देना चाहिए, शक्ति-सहन की टेव डालनी चाहिए। एक बच्चा यदि दूसरे का खिलौना ले भागे तो उसे छीन कर लौटाया करना चाहिए, और बातों से यह भाव प्रकट कर देना चाहिए कि स्वामित्व अपनी ही वस्तु का अच्छा होता है। लालायित होने पर भी अनुचित वस्तु बच्चे को न मिलनी चाहिए, उसे यह प्रतीत हो जाना चाहिए कि वह जो जो चाहे सभी उसे नहीं मिल सकता। यह सब अभ्यास धीरे धीरे डालना चाहिए।

(९) सबसे अधिक प्रमाद भोजन के विषय में होता है। बच्चे के मुँह से रोने का शब्द निकला कि अनेक वाला ने उसे दूध पिलाना प्रारम्भ कर दिया, मानो दूध पिलाना उसके लिए उपयोगी है। ऐसा नहीं होना चाहिए। भोजन के लिए समय नियत होने चाहिएँ। इसकी पाबन्दी न करने से ही बच्चा अनेक रोगों का अड्डा बन जाता है।

(१०) कोई कोई बच्चे बड़े हठी होते हैं, जिसका बात पर हठ ठान लेते हैं वो फिर नहीं मानते। ऐसी दशा में हठ का उत्तर हठ से देना भूल है, और बालक की आत्मा को निर्बल करना है। मेरा तात्पर्य यह नहीं कि बालक जिस जिस बात के लिए हठ करे उसकी पूर्ति अवश्य ही की जाय। किसी प्रकार उसका मन उस विषय से हटा लेना, और अनुकूल समय पर उससे उचित काम कराना ही इसका उपाय है। हठ के आवेश में बालक आपकी बात नहीं सुनेगा, इसलिए उस समय उसे उपदेश देना ही न चाहिए। आवेश हट जाने पर आप अपनी इच्छा की पूर्ति करा सकते हैं।

(११) दण्ड का प्रभाव उसके भाव से होता है। हँस हँस कर चाहे जितने थप्पड़ चाहे बालक को मार लें, वह उन्हें प्रसाद समझेगा; परन्तु मुँह लटका करके यदि आप इतना ही कह दें कि जाओ तुम अच्छे बालक नहीं हो, तो बालक दुःखी हो जायगा। दण्ड का बहुत सा काम तेव से हो सकता है, तथापि किसी समय यदि दण्ड देना ही उचित समझा जाय तो वह हलके से हलका हो, और बच्चे को यह पूर्ण प्रतीत रहे कि

अमुक दोष या अपराध के बदले में यह दण्ड दिया गया है। यदि ऐसी प्रतीति उसे हो जायगी तो वह फिर वह अपराध न करने की चेष्टा करेगा, और दण्ड देने पर रोयेगा नहीं, किन्तु नम्रता के साथ चले सहन कर लेगा। यह अच्छी आदत है। हमारे शास्त्रकारों ने तो यहाँ तक कहा है कि "लालयेत् पञ्च वर्षाणि"। लालन के समय लाड़, बिना ताड़न के ही, दण्ड हो सकता है।

(१२) धनी लोग निर्धनों तथा अपने आश्रित जनों को प्रायः बड़ी तुच्छ दृष्टि से देखते हैं और अपनी उचित अथवा अनुचित आज्ञाओं तथा इच्छाओं को बड़ा महत्त्व देते हैं। इस कुवृत्ति का सूत्रपात उनके बचपन में ही होता है; बच्चाजी जो जो इच्छा करते हैं सबकी पूर्ति होती है, जिसको गाली देते हैं या कटु वचन कहते हैं वह रोता के मोल से सब सुन लेता है। यदि किसी ने कुछ उपदेश देने की हिम्मत भी की तो अन्य आश्रित जनों ने उसका खबर वहाँ ले ली। क्या ही अच्छा हो यदि इस बीमारियों की इलाही तबदीली में ही कर दी जाय। उपाय कठिन नहीं है, परन्तु उस उपाय के करनेवाले दुर्लभ हैं। लालनपालन के द्वारा शायद यह रोग हट सके!

ऊपर की कतिपय बातें हमने उदाहरणार्थ लिखी हैं। यह विषय बड़ा गहन है, इस पर तो एक बड़ी पुस्तक की आवश्यकता है। यदि विचारशील लोग इस विषय पर ध्यान दें तो लोक का बड़ा हित हो सकता है। बाल-लालन का बड़ा महत्त्व है। बाल्यकाल में पाये हुए संस्कार बड़े दृढ़ और स्थायी होते हैं, वे संस्कार नींव हैं जिस पर सारी प्रासाद बनाया जा सकता है। मेरा धारणा तो यह है कि जितने भी सच्चरित्र-वाले, उपकारी, विचारशील, और सर्वताभावेन अनुकरणीय, महापुरुष हैं, उनके इन सद्गुणों का बीज-वपन उनके बाल्यकाल में ही हुआ होगा। संगति का प्रभाव अकाट्य है, बालकों की संगति उनके खेलानेवालों से होती है और उन्हीं का प्रभाव उन पर पड़ता है। अतः बाल-लालन का भार लेनेवालों को सावधान होना चाहिए। तथास्तु।

चन्द्रशेखर सुकुल

Section II—History, Politics and Economics

Pandit Madan Mohan Malaviya
Age 60

THE MURUṆḌA DYNASTY AND THE DATE OF PĀDALIPTA.

1. There are, apart from the inscription of Samudragupta on the Allahabad Pillar, two references worthy of notice, bearing on the dynastic title *Muruṇḍa* (that is the Kushānas).[1] It seems that the line of rulers described as sahānuśāhi-Śaka-Muruṇḍa were called popularly in India as Murundas in their time. In Jaina texts we find a Muruṇḍa ruler at Pāṭaliputra who sends his envoy (*dūta*) to the king of Peshawar (Purisapura). This envoy, who put up with the royal minister in that capital, found too many Buddhist monks there. Each time the Patna envoy came out of his lodging place to go to the palace for audience, the first sight he met with was that of a Buddhist monk which he regarded as inauspicious. The Peshawar minister told him that the capital was full of them, that is, he would not be able to avoid them.[2]

2. This shows that at Pāṭaliputra the Buddhist monk had become a rare phenomenon, and the envoy was probably an orthodox Brahmanical Hindu. The condition of Peshawar, which was the capital of apparently an

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[1] J. B. O. R. S., XVI, 287-289, 303-304.

[2] *Āvaśyaka-Bṛhadvṛtti*, U. I, P. 3. Muni Kalyāṇavijayaji has kindly sent the *gāthā* relating to the envoy's visit to Peshawar:—

पाडलिपुत्तंमि नगरे मुरुंडो नाम राया। तस्सिदूतस्स पुरपुरे नगरे गमनयं।

टीका:—पाटलिपुत्रे नगरे मुरुंडो नाम राजा। तस्सिदूतस्स पुरपुरे नगरे गमनयं।

important king to whom the envoy was deputed, indicates that it was the capital of Kanishka or his predecessor. The Murunda ruler at Pāṭaliputra was evidently a Murunda provincial governor.

3. This incidentally fixes the time of the Jaina teacher Pādalipta whose religious instructions to the Murunda of Pāṭaliputra are noted in several Jaina texts including the *Prabhāvaka-carita*. The Prakrit *gāthās* relating the curing of the head-trouble of the Murunda by Pādalipta and his consequent conversion are old materials. The medieval Jaina works give his time about 484 A.M. (J. R. A. S., 1925, p. 86) which is a little too high.

4. The definite statement that a king with his capital at Peshawar was a contemporary of the Murunda of Pāṭaliputra will not allow Pādalipta to be placed in 484 A.M. (43 B. C.). That the time referred to is that of Kanishka is further corroborated by Pādalipta's controversy with Nāgārjuna[1] who is associated with Kanishka.

5. I have given the Purāṇic calculation as ending the Murundas about 243—247 A.D. (J. B. O. R. S., XVI. 289). About this time, an important king is mentioned in Chinese works as ruling in India and bearing the name Murunda (Mu-lun). An embassy was sent to India by the king of Funan (Indo-China) who heard about India from an Indian merchant, about 240 A.D. When the embassy returned sometime between 244 and 252 A.D. an imperial Chinese ambassador met an Indian at the Court of Funan who gave the name of the king in Indian as *Mu-lun*.[2] This Indian had reached there with the Funan embassy which returned from India about 244 A.D. The

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[1] Shamasastry, J. R. A. S., 1925, p. 85, Pādalipta could not have been a contemporary of Balamitra who lived long before and figures as a contemporary of Kālaka.

[2] Levi, cited by Finot in IHQ. I. 612.

embassy carried four Yüe-chi horses as a present from the Indian king ('the king of India') to the king of Funan. We have thus the information that the dynastic name current at the time was Muruṇḍa. The Purāṇas which describe the dynasty as *Tukharas* alternatively call them Muruṇḍas, the Vāyu giving prominence to the latter appellation (J. B. O. R. S., XVI, 203).

K. P. JAYASWAL

NEW LIGHT ON THE EARLY GUPTA HISTORY

There is a passage in the *Harṣacarita* of Bāṇa which enumerates the instances of rulers coming to grief through their carelessness or over confiding nature. Soon after the death of Rājyavardhana through treachery, Harṣavardhana resolves to avenge his brother's murder, and it is at this juncture that his friend, Skandagupta, Commandant of Elephants, while giving support to the resolution formed by the king, warns him against showing any tendency of universal confidingness by citing the instances of untimely death of princes who were not sufficiently vigilant. Fitz-Edward Hall was the first to draw the attention of the scholars to this passage, and he did so as early as 1859 by publishing a translation of it in the preface to his edition of *Vāsavadattā* in the Bibliotheca Indica. He was followed by Bhau Daji, who in 1871 contributed a paper on the *Discovery of Complete Manuscript Copies of Bāṇa's Harṣacarita*, with an analysis of the more important portions. The paper appeared in the *Jour. Bo. Br. R. As. Soc.*, Vol. X, p. 38 and ff., and as he was in possession of better copies, he was able to improve upon the translation of F. E. Hall. It was not, however, till 1892 when the first Bombay edition appeared that the scholars were in possession of the correct text of the original and also the commentary of the erudite Śaṅkarārya. In 1897 was published the scholarly translation of the work into English by E. B. Cowell and F. W. Thomas. And to complete the whole, a new edition of the Text and Commentary was brought out in 1909 by Prof. A. A. Führer in the Bombay Sanskrit and Prakrit Series.

Ever since the translation of the work by Cowell and Thomas was published, the *Harsacarita* is being tapped by many a scholar to yield all the historical information it contains. It is true that so far as the history of Harṣa and his family is concerned, we have practically exhausted its contents. The passage, however, which records the cases of the rulers who through carelessness fell a prey to the machinations of their enemies has not attracted as much careful study as it deserves. This is all the more regrettable, because it bristles with political incidents which are exceedingly important for the ancient history of India. One such political episode is concerned with Candragupta II of the Imperial Gupta dynasty. The words of the *Harsacarita* which describe this event is given in Extract A, and the gloss of Śaṅkarārya on them in Extract B. This was all we knew about the Gupta emperor from the literary sources up till 1923 when our information was all of a sudden very much augmented from two unexpected sources. One of the works then discovered by the Government Oriental Manuscripts Library of Madras was *Śṛṅgāra-prakāśa* by Bhoja. It contained four passages (Extracts C—F) from a Sanskrit drama, till then unknown, which was called *Devī-Candra-gupta* and bore upon the adventurous life of the Gupta king. Three of these were called together in an interesting paper published by Mr. A. Rangaswami Sarasvati in the July number of *Ind. Ant.* for 1923. A really material addition to our knowledge was, however, made by Prof. Sylvain Levi, who, while announcing the discovery of the *Nāṭyadarpaṇa*, a joint production of Rāmachandra and Guṇachandra, pupils of Hemachandra, preceptor of the Chaulukya king Kumārapāla (A.D. 1145—1171), gives five important extracts (G—K) from the same drama. They have been set forth in his paper appearing in the October-December number of the

Journal Asiatique for 1923. From an examination of these passages he rightly infers that Candragupta of this play must be Candragupta II of the Imperial Gupta dynasty. But he does not attempt at reconstructing the history of the time of this king, though the passages, brief as they are, throw a flood of light on this subject. It was the late Prof. R. D. Banerji, we are told, who first made this attempt in the Lectures he delivered before the Benares Hindu University in November 1924. Unfortunately these Lectures have not yet been published. A second attempt was recently made by Prof. A. S. Altekar of the same University, with the further help of two additional passages (Extracts L-M). He has set forth his views in the shape of a most informing article which has been published in the June number of the *Jour. Bih. Or. Res. Soc.*, for 1928. This was followed by another article of his (J.B.O.R.S., 1929, p. 134ff) in which he draws the attention of scholars to the story of Rawwāl and Barkumāra as narrated in the *Majmalu-t-Tawārīkh*, a work composed early in the 12th century A. D. The story has such a great resemblance to the plot of the *Devī-Candragupta* that it may be judiciously used to fill in the details on which the extracts shed no light. It cannot therefore be doubted that Prof. Altekar has already done much towards the reconstruction of the Gupta history, but it cannot be denied that something still remains to be done. I therefore give no excuse for attempting this reconstruction in my own way, knowing full well that some scholar will soon come after me who will push this enquiry one step further. To the extracts from the *Devī-Candragupta* brought together by Mr. Rangaswami Sarasvati and Prof. Sylvain Lévi I am able to add one, viz., from the *Śṛṅgāraprakāśa* which I owe to the courtesy of Mr. Ramkrishna Kavi.

The first question that arises is, Who is the author of the *Devī-Candragupta*? This question is answered by the

prose portion of Extract J which tells us that it was a production of Viśākhadatta. He must doubtless be the same Viśākhadatta that composed the *Mudrā-Rākshasa*. Now, let us consider what information is supplied about the early Gupta history. Extract G is most important in this connection. The prose portion of it tells us that king (*rājan*) Rāmagupta agreed to give over Dhruvadevī to the Śaka in order to keep his subjects cheerful (*prakṛtānāmārādhanāya*) and tried to dissuade (his brother) Kumāra Candragupta from going in the garb of Dhruvadevī to kill the enemy. This is made quite clear in the verses that follow where Rāmagupta says that he is ready to forsake Dhruvadevī and court infamy simply for the sake of Candragupta. If we read between the lines, it seems that the enemy at first wanted Rāmagupta to surrender Candragupta to him but the Gupta king refused to comply with the demand, partially in consequence of his deep brotherly love to the latter but chiefly to quiet the minds of his people to whom the surrender of Candragupta would have caused grave dissatisfaction, and that it led ultimately to the compromise of the queen being handed over to the enemy. Candragupta, however, did not like this compromise and hit upon the expedient of meeting the enemy in the garb of the queen and killing him. In this fragment of history one point alone is not quite clear. The enemy in question is called simply the Śaka. *Prima facie* this Śaka appears to be some Śaka king. Śaṅkarārya, however, gives us to understand a somewhat different thing, as will be seen from Extract B. There he tells us distinctly that this Śaka is not the Śaka ruler, but rather *Śakānām-ācāryaḥ*, 'the preceptor of the Śakas,' who was seeking for Dhruvadevī. At first thought, it is true that one does not feel inclined to accept this statement, and this was particularly so before the above extracts from the *Devī-Candraguptā* were published. Because

Śaṅkarārya in his gloss also tells us that this Dhruvadevī was the wife of the brother (*bhrātṛ-jāyā*) of Candragupta, whereas the Gupta inscriptions are unanimous in telling us that she was Candragupta's wife. This mystery, however, is now unravelled for us by the extracts given by Dr. Sylvain Lévi, from which it is evident that originally she was the wife of Rāmagupta but was afterwards married to Candragupta. If Śaṅkarārya's information is thus found correct when it was believed to be contradicted by all the known Gupta inscriptions we have to believe him also when he says that the Śaka in question is not the Śaka king but the preceptor of the Śakas. How exactly this preceptor forced the Gupta king to surrender his queen is not clear, and we must await the discovery of the whole manuscript of this drama, which, let us hope, will be announced before long.

The next point that we have to consider is where these hostilities between Śakācārya and Rāmagupta could have taken place. Extract C shows that the enemy's camp was stationed at Alpura which, according to Mr. A. Rangasvami Sarasvati, was wrongly changed into Arpura. This is supported by Extract A which also gives the reading *Alpura*. He may be right, but that does not enable me to identify the place. Perhaps more help is forthcoming in this matter from a careful consideration of the contents of Extract M, which Mr. Altekar was the first to bring to our notice but which he has apparently failed to utilise fully in this connection. The verse which forms the extract is addressed to a king and says that his praises are sung by the women of Kārttikeya-nagara just in that Himālaya from where Śarma (v. l. Seva) gupta was forced to retreat after giving over his queen Dhruvasvāminī to the king of the Khaśas. The name Dhruvasvāminī and the incident of a king being compelled to surrender his queen to the enemy leave no doubt as to its being the political episode

dramatised in *Devī-Candraguptā*. There are, however, two different names here to be accounted for. The important of these is Śarma (v. l. Sena) gupta, instead of Rāmagupta. But both of these seem to be misreadings, as we shall try to show later. As regards Khaśa, it is almost the letters Śa-ka reversed. And as Khaśas were perhaps known better than Śakas especially in the Himalayan region the letters which were originally Śa ka, came naturally to be reversed and turned into Kha śa with a slight change. Unfortunately Prof. Altekar separates *Kārtikeya* from *asgara* and takes the former name to stand for Kumāragupta who in his opinion is the person addressed in this stanza. But why should Kārtikeya stand for Kumāragupta, and not for Skandagupta, is far from clear. Secondly, why should the caves be taken to reverberate with the exploits of Kumāragupta or Skandagupta about which we know nothing? On the other hand, the stanza attains to its fullest significance if we take it as addressed not to Kumāragupta, but to his father Candragupta II. For in that case we can easily understand why the praises of this Candragupta are sung just in those Himalayan caves from where his brother had to effect an ignominious retreat by promising to surrender his wife Dhruvasvāminī. This seems to be the natural sense of the stanza. It is therefore advisable to take Kārtikeya asgara as one word.

New Gazetter, N.-W. P. (Vol. XI, p. 463 and p. 48, f.) tells us that Kārtikeyapura lay in the valley of the Gomati and near the present village of Bajnāth which is comprised in the Almora District of the U.P. and thus situated in the Himālayas. It is mentioned in the *Deva-Purāṇa* (Chap. IX). The town and district of Kārtikeyapura are mentioned in the Pāṇḍukeśvar copper-plate grant of Lalitasūradeva, assigned to about the middle of the ninth century A.D. (*Ind. Ant.*, Vol. XXV, p. 178 ff). Kārtikeya

pura is also mentioned in the two Taleśvara charters (*Ep. Ind.*, Vol. XIII, pp. 115 and 118) of Dyutavarma which have been ascribed to about the sixth century. It will thus be seen that a place is still known in the Himālayas, viz., Baijnāth, which is still called Kārttikeyapura and that it was in existence at least as early as the 6th century A.D.

It thus appears that the fight between Rāmagupta and the Śakapati took place not far from this place. It does not seem likely that the kingdom of the Śakapati, if he is supposed to be a member of the Kṣatrapa family of Gujarat and Malva, could have extended as far as the Himalayas. This also shows that Śaṅkarārya is most probably right in taking Śakapati as Śakādhirācāryah. This preceptor of the Śakas could stay on a hill top in a religious retreat, perhaps in subordination to a different king who ruled over those hills.

Here perhaps the Mujmalu-t-Tawārīkh may be brought in for our help. For we are told that a former rebel of his father attacked Rawwāl, that is, Rāmagupta and put him to flight. Rawwāl with his brother and nobles went to the top of a mountain where a strong fortress had been built. But the enemy got possession of the mountain by stratagem, besieged the fort, and was near upon taking it. Rawwāl then sued for peace, and the enemy asked him to send his queen for himself and compel his chiefs to send their girls for his officers. Just at this juncture his brother Barkamāris came in and proposed to go to the enemy's camp dressed like the queen, in accordance with his scheme which was explained and approved. This account shows that Rāmagupta and his brother were hemmed in and defeated not on the plains in their capital at Pāṭaliputra but on some mountain which, as Extract M shows, must have been situated near Kārttikeya-nagara, that is, near Baijnāth on a hill top. It seems that Rāma-

gupta had started on an expedition of conquest and was in the hills of Almora. And we shall not be far from right if we suppose that he was in the country of Kartripura which is described in the celebrated Allahabad pillar prasasti as one of the independent kingdoms on the frontier of Samudragupta's empire. It is possible that Samudragupta tried but failed to conquer this dominion. What he could not do his son might have attempted, but with what ignominious disaster we know. The preceptor of the Śakas might have attacked Rāmagupta and his party on behalf of his overlord, the ruler of Kartripura. That both the Sakārīs and Rāmagupta were in camp is clear from Extracts C and F. It appears from other extracts (*e.g.*, F) that Rāmagupta's queen, Dhruvasvāmini had also come with him but stayed in a place assigned to *rajakula*.

Here the information supplied by the *Majmalat-Tawārīkh* has to be supplemented or corrected in the light of the inference permissible from Extracts G and H. The *Tawārīkh* says that when Rawwāl sued for peace, the condition which his enemy insisted upon at the very outset was the surrender of the Queen. It, however, appears from the extracts that the preceptor of the Śakas stipulated at first that his younger brother Candragupta should be delivered. Fearing that this term of capitulation, if accepted, might increase his people with whom the latter was a favourite, Rāmagupta had it altered and agreed to send his wife instead. This is quite clear from the words *prakṛtiṇam-āsannaṇāya* used in the introductory portion of Extract G and *tad-artha yadaṇ saka parityakta naya deṇ* in one of the verses following. We know, this made Candragupta indignant and he resolved to carry the stipulation through without bringing ignominy on their family. At the dead of the night he retired to a solitary place with his friend Āteya, the Vidūshaka, with the object of propitiating Vetāla. There he was met by a

Cheṭī who came there with a dress worn by Dhruvasvāminī being directed to do so by some Aṇukī of the royal family with whom Candragupta was in confidence. He put on that dress and saw Rāmagupta before departure. The interview of the two brothers is depicted in Extracts G. and H. which form part of Act II of the drama. It is in this interview that jealousy is aroused in the mind of Dhruvasvāminī who by the *double entendre* of the words employed thought that her husband Rāmagupta was conversing not with his brother but some young lady. In spite however, of the remonstrances of Rāmagupta, Candragupta resolved to carry out his object But it was necessary that he should go along with a female retinue. From the clause *strī-veṣa-yoṣa-parivṛtaḥ* in Śaṅkarārya's gloss, it is plain that Candragupta was accompanied by some males dressed as female attendants. Some light is thrown on this point by the Tawārīkh referred to From this account it seems that all the officers dressed their sons in like manner as damsels. Every one of them concealed a knife in his hair, and Candragupta besides carried a trumpet also concealed. When they reached the enemy's camp, they were distributed as previously arranged, Candragupta to the rebel King and his attendants to the latter's officers. When the King retired with Candragupta dressed as Dhruvasvāminī, the latter ripped his belly with the knife and sounded the trumpet. When the other youths heard it, they did their work in an instant. All the officers of the army were thus slain. On hearing the trumpet, Rāmagupta's soldiers also sallied forth and exterminated the foe. Candragupta's ruse succeeded so wonderfully that the enemy's horsemen were all slain and cast down from the mountain.

After the narration of this event the Tawārīkh goes on to say that Rawwāl's Wazīr, Satar, that is, the prime-minister of Rāmagupta thereupon excited the king's

suspicions against Barkanāṭha (=Vikramāṅka) or Candragupta and that the latter was therefore compelled to feign madness. The words 'feign madness' cannot but arrest our attention. For as Extract K shows, Candragupta is twice introduced into Act V of the drama as *kṛtrim-unmatta*, *i.e.*, playing the role of a lunatic and as *ev-āpāya-śaṅkin* and *saṃkīt-ātmā-bhuto*, *i.e.*, 'as fearing danger to his life' and 'being a little afraid of the enemy'. There can be no doubt that these stage directions refer to Candragupta when he had killed the Śaka preceptor and enhanced his fame and also his hold over the popular mind. In this way alone could he excite the suspicions of Rāmagupta. That he had made short work of this preceptor by this time is certain, because when he comes on the stage for the first time in Act V in a *praveśa*, he utters a verse describing the rise of the moon by saying that this luminary had by mere rising destroyed the heap of darkness, namely, all his enemies but had now entered upon the sky to step across the *praśa*, that is (the eclipse of) Rāhu. The first of these two events must refer to the destruction of the Śaka preceptor and his party, and the second to the machinations of Rāmagupta through jealousy against him. Both the events must have come off before the commencement of Act V. If his dressing himself in the garb of Dhruvasvāmini and taking leave of Ramagupta are shown in Act II, the event of finishing off the Śaka preceptor and his soldiers must have come off in Act III. Probably about the end of Act III, or the beginning of Act IV, he comes to know about the malicious intentions of his brother Rāmagupta. He must therefore have been forced to remain *in cognito* somewhere. This perhaps explains why we have at least two stanzas quoted from Act IV, which are addressed by Kaviṭa Candragupta to one Mādhavasenā who is represented as not only a *vesyā* or prostitute but also *nāyika* or heroine. It seems that it was in her house that

he had concealed himself to escape from his brother's machinations and that it was here that he had conceived a love for the artiste so genuine and so strong that Mādhavasenā, though a prostitute, could not but be called the *nāyikā* of the play. Before her he appears as Kumāra Candragupta, and it is therefore intelligible that the language of the stanzas he addresses to Mādhavasenā in Act IV is Sanskrit. The case, however, is different when he leaves her house and comes out in the open by playing the role of a mad man in Act V, with a view probably to secure information about any plans that may have been formed by Rāmagupta and his prime minister to detect and arrest him. When he thus feigns madness, the language that he uses is not Sanskrit, but Prakrit.

It has been mentioned above that in Act V, Candragupta appears twice as a lunatic. [The first time he so appears is in a *prawesa*. It is difficult to say whether this *prawesa* comes off at the beginning or about the middle of that Act.] This is quite evident from the prelatory words of the *Nāṭyadarpaṇa*, *yathā* '*Deva-Candragupta pañcamaṅkē*. And the concluding remark of the same work is that Candragupta at that time not only was acting like a lunatic because he was slightly afraid of the enemy but was also intent upon concealing his emotion of love (*madana-vikāra-gopanapara*) and was anxious to repair to the palace (*angakala*). The question arises, for whom could he have this love? Was it for Dhruvasvāminī? When in Act IV his love for Mādhavasenā has been depicted in such a way as to compel the authors of the *Nāṭyadarpaṇa* to say that she was not merely a prostitute but the heroine, it does not seem likely that in the very next act there could be any suggestion of his love for Dhruvasvāminī. It is creditable neither to Candragupta nor to Dhruvasvāminī nor even to the author of the play to represent a hero transferring his love so fast from one

damsel to another. It is therefore natural to suppose that in this case Candragupta's love to Mādhavasenā is referred to and that he probably wanted to keep it in abeyance for some time to enable him to go into the outside world to ascertain and counteract the machinations of Rāmagupta. This alone can easily explain why he wanted to forget his love for Mādhavasenā for a time and to go to the palace.

What happened in the palace we can infer from a verse from the Sañjān copper-plate grant which forms Extract N. Candragupta killed his brothers and seized not only his throne but also his queen. Acts VI and VII are perhaps occupied with these events. But a glimpse into the nature of this occurrence is afforded us by the Tawārīkh, which is therefore worth tapping here. One day in the hot season, we are told, Bārhamāris, that is, Candragupta was wandering barefoot in the city as a mendicant, and came to the gate of the king's palace and found him and his queen sitting on a throne sucking sugarcane. When Rawwāl, that is, Rāmagupta saw him, he took pity on him and gave him a bit of sugarcane. The mendicant took it, and picked up a bit of the cane shell to scrap and clean it with. When the king saw that he wanted to clean the cane, he told the queen to give him a knife. She rose and gave the knife to Barkamāris, who cleaned the sugarcane with it, and craftily watched until the king was off his guard. Then he sprang upon him and plunging the knife into his navel, ripped him up. He next called the Wazīr and the people, and seated himself on the throne amid the plaudits of the people.

As regards the Wazīr, Barkamāris admitted that although he counselled his brother in all his dealings, he did but his duty and requested him to continue to govern the kingdom as he did for his brother. But Safar replied

that as he was with Rawwāl in life, he would be with him in death also. Barkumaris, however, told him to write a book on the duties of kings. Sabir consented, and wrote the book which is called "Instruction of Kings." Which book could this be? May it be the *Nīsāra* of Kāmandaka?

The story of the *Devī-Candragupta* raises two questions of importance, the first a social and the second a historical one. The first of these is: How Candragupta II could marry his dead brother's wife? We are not here much concerned with the moral turpitude or otherwise involved in such a course of action. That question is fairly well answered by the *Majmalu-t-Tawārīkh* which tells us that Dhruvasvāminī had really chosen Candragupta in a *swayamvara* ceremony for his wisdom and handsome form, but that when he brought her home, his brother took the girl from him, so that he was forced to give himself up to study and associate with the learned. When therefore Rāmagupta was killed by Candragupta, she could have no compunction in marrying him though he was her husband's murderer, for as a matter of fact she had already chosen Candragupta but was compelled to marry his brother instead. This is the straight reply to our first question so far as its moral aspect goes. But we are here concerned not with its moral but its social side. When Candragupta marries Dhruvasvāminī, she is a widow. How can he marry a widow? Secondly, he marries a lady who is not only a widow but his own elder brother's wife. How could Candragupta marry a widow who was his own brother's wife? This is the real social question that presents itself to us, because nothing is more shocking than this to an orthodox Hindu of the modern day. This, however, is in no way surprising to a scholar who is conversant with the Smṛti literature. The well-known text *nashṭe mṛite pravrajite klibe ca patite patau*

pañcasv-āpatsu nārīṇāṁ patir-anyo vidhīyate occurs not only in the *Parāśara* but also in the *Nārada Smṛti* (XII, 97). This text allows a woman to remarry another man in five kinds of adversity, viz., when the first husband is untraceable, or dead, has become a religious ascetic, or expelled from caste, or when he is impotent. The *Nārada-Smṛti* has been referred by Prof. Jolly to the 5th or 6th century A.D. It is thus of the early Gupta period and must therefore be considered as reflecting the practices of that age. Now this law-book also says:

Apaty-artham striyaḥ sṛṣṭāḥ striḥ kshetraṁ bījino naraḥ |
Kshetraṁ bījavate deyaṁ n-ābījī kshetram-arhati (XII, 19) ||

Translation

"Women have been created for the sake of propagation, woman being the field, and man the giver of the seed. The field must be given to him who has the seed. He who has no seed is unworthy to possess the field."

A text more suitable to our case may also be quoted

Mṛte bhartari saṁprāpte devar-ādir-apatyaṁ yat |
Upagacchet paraṁ kāmāt sa dvitīyā prakīrtitā || (XII, 50)

Translation.

When a woman, after the death of her husband, rejects her brother in law or other (relatives) who have come to her, and unites herself with a stranger through lust, she is the second (type of wanton woman).

There is no question of any *niyoga* here. The woman referred to in this verse is not described as *niyukta* or appointed by the husband or elders for the purpose of raising an issue. It simply says that a woman when her husband is dead must first unite herself with her

brother-in-law or other kinsmen, if any one of them is ready for this purpose For what is a woman after all? She is intended for procreation Because she is but a field which really belongs to a man who has the seed. The only question is: the order of precedence. If she has a brother-in-law or a *sapiṇḍa* kinsman, he possesses a prior claim to her over that of any other man. If this is the line of reasoning which is commendable to the Smṛti, Candragupta had every right to marry Dhruvasvāmini In fact, there is one stanza (Ext L) quoted from our drama, where the words *klība* and *kṣatrikṣa* have been used with reference to Rāmagupta and Dhruvasvāmini respectively. We are told in this verse uttered by Candragupta himself that Rāmagupta, though a man, behaved himself like a *klība* or impotent man by offering to surrender his queen to his enemy. Dhruvasvāmini had thus to become *kṣatrikṣā*, that is, fit for being used by a stranger. The conduct of Candragupta in marrying her was thus not at all opposed to the law laid down by the Smṛti. If widow marriage and marrying the wife of a dead elder brother had been prohibited by the Dharmaśāstra, he would not have been able to perform the ceremony and, above all, his son Kumāragupta I from that queen would never have been allowed to succeed him to the throne. What we as laymen have to bear in mind in this connection is this We read of widow marriage or marriage with a brother-in-law as being permitted by the śāstras but think nothing of them further because no clear historical instance of such an event was so far known. But when we find, as we do now, that no less a personage than Vikramāditya, who made the Gupta period a Golden Age in the ancient history of India, himself marries a widow who was again the wife of his brother killed by himself, it cannot but shock the orthodox susceptibilities of most of us, howsoever we may like to contemplate

his learning and the patronage he gave to Sanskrit literature.

The second question that we have now to consider is whether Rāmagupta represents the correct form of the name of the Gupta sovereign who was the elder brother of Candragupta II. This question arises, because this name is not yet traceable in any of the inscriptions and coins of the early Gupta dynasty. It is true that this is an argument *ab silentio* and as such is not always to be relied upon. Nevertheless, we have to remember here that up till now so many coins and epigraphic records of the Gupta sovereigns have been found that it cannot but be considered strange that the name Rāmagupta has not yet been traced. On the other hand, of just about the time of Samudragupta and Candragupta II we have discovered coins issued by a ruler who calls himself Kāca. This Kāca is taken as a title of Samudragupta, because on his coins we notice the epithet *sarvarājocchettā* which in inscriptions is associated with Samudragupta and Samudragupta alone. This was the view which was originally propounded by V. A. Smith (*Ind. Ant.*, 1902, p. 259) and has been endorsed by Mr. John Allen in his *Catalogue of the Coins of the Gupta Dynasties* etc. (Intro., p. xxxvii). There was no doubt some force in this argument before the plates of Prabhāvatīguptā came to light. Prabhāvatīguptā, we know, was the Chief Queen of the Vākāṭaka king Rudrasena II. Above all, we are told that she was a daughter of *Mahārājādhirāja* Candragupta II from his queen Kubera-nāgā. And while describing this Gupta ruler, the record couples with his name just those four epithets which according to Smith are coupled with Samudragupta alone in inscriptions (*Ep. Ind.*, Vol. XV, p. 41). And one of these is *sarvarājocchettā*. If *sarvarājocchettā* thus becomes an epithet not only of Samudragupta but also of Candragupta II,

there is no reason why it should not be an epithet of a third Gupta king also. Nothing is therefore more absurd now than to suppose that Kaca is the same prince as Samudragupta, simply because Kāca assumes the epithet of *sarvarājocchetā* on the reverse of his coins. On the contrary, there is every reason to hold that Kāca was a ruler separate from Samudragupta or Candragupta II. For on Gupta gold coins the name which appears on either side of the standing figure of a king on the obverse especially below his left arm is the personal name of the king who issues them. Thus is how the names Samudra, Candra, Kumāra and Skanda are found on the obverse, and if these are considered the individual names of separate Gupta kings, for the same reason we ought to take Kāca also as separate from those just mentioned. All evidence thus points to Kāca being regarded as the personal name of a king distinct from Samudragupta. On the grounds of type and fabric numismatists connect his coins in time with those of Samudragupta and Candragupta II. The conclusion is therefore not unreasonable that Rāmagupta, the elder brother of Candragupta II, is a misreading of Kācagupta. The letters *k* and *c* of the Gupta period are of such a type as are easy to run into *r* and *m*. If the middle bar in the Gupta letter *ka* drops, it can be read as *ra* only. Similarly, if the lower left loop of the Gupta *c* extends itself unwittingly, as it does in cursive writing, it must read as *m*. In fact, if any student of numismatics inspects coin No. 6 on Plate II. of Allan's *Catalogue*, he will find on the obverse the name, not *Kaca*, but something like *Rāma*. And if the middle bar is inadvertently omitted as very often happens in manuscripts, *Kāca* can easily run into *Rāma*. We shall not therefore be far from right if we suppose that originally in the *Deva-Candragupta* drama we had Kācagupta as the name of the elder brother of Candragupta II, but

that later on, thanks to the hurried cursive hand of the scribes, Kīcagupta came to be written and read as Rāmagupta.

APPENDIX: ORIGINAL PASSAGES

(From the *Harṣacarita*)

A

Ari (v.l. Ali)pure ca para-kalatra-kāmukaṃ kāmini-veṣa-guptaś=Candragupta-ḥ Śaka-patir=ānīta iti ।

(From Śaṅkarārya's commentary)

B

Śakānām=īśvaraḥ Śak-ādhipatiḥ । Candragupta-bhrātṛ-jāyāṃ Dhruvadevīṃ prārthayamānam=Candraguptaṃ Dhruvadevī-veśa-dhārīṇā strī-veśa-janapariveṣṭa vyāpādita iti ।

(From the *Śṛṅgāraprakāśa*)

C

Strī-veṣa-nihitaḥ Candraguptaḥ śatroḥ skandhāvāraṃ Alipuraṃ Śakapativadhāy=āgamat ।

D

Devī-Candragupte vidūṣakaḥ prati Candraguptaḥ ॥ —

Saṅ-vaṃśyān pṛthu-varṇana-vikrama-balān dṛṣṭ=ādbhutān dantinaḥ

Hāsasy=eva gṛhā-mukhād=abhiṣṭakhaṃ aṭṭaḥkramataḥ parvatāt ।

Ekasy=āpi vidhāta kesara-jaṭā-bhārasya bhārā mṛgāḥ

Gandhād=eva harer=dravanti bahavo vīrasya kiṃ mukhyayā ॥

E

Devī-Candragupte Vasantasenāṃ=uddiśya Māthavasya=ukti ॥ —

Ānanda śīra-jalaḥ śrī-utpala-rucor=abadhnatā netrayoḥ

Pratyādeśa var-dāne pulakiṭa svedaḥ samāśrayaṃ

Karvāpena nitambayor=upacayaḥ saṃpūrṇayor=apy=asau

Kenāpy=aspṛṣṭa=apy=atho nivasana-granthiḥ=tav=occhvāsitaḥ ॥

F

Yathā Devī-Candragupte śakapatinā parāṃ kṛcchrāṃ=āpāditāṃ Rāmagupta-skandhāvārāṃ=anugṛhīkṣuḥ=apāyanāt-āgacchati pratikūle sati Vaiśālī-sādhanaṃ=vilāpayāsyāḥ kumāra—Candragupta Āreyena vijñāpayati :—

Vidā—bho sakkaṃ dāṇiṃ bhavadā liṅkye velāye maṇhaṃ dāyāgaṇi sāmiṇā gadido padāṇi vi gaṇituṃ ?

Nāyakah—(saṃgrāmaṃ) ārya=upāyaḥ=cintanīyaḥ

(pravāsya Ceṭī pātalaka-hastā)

Ceṭī—jayadu jayadu kumāro ! kumāra kahaṃ ajjaṃ ... [1]) ajja kha ajjaṃ kesavi kāraṇaṃ aṇṇa vimaṃ kaṇṇāṇaṃ pekkhāmitti bhaṇaṃti rāyāṇiṃdo ajjakaṇṇā ! ... ca ve devīṃ Dhruvadevīṃ sa-ādara-parikhuṇṇāṃ paṇṇāmaṇṇa pāsāṇiṃdaṃ gahiṇi kumāraṃ saṃpe ajjaṇāṇi maṇṇāmaṇṇa āgadāṇi ! avatte a pekkhāmi maṇṇā jāva ajjaṇāṇi sāmeṇāṃ (nirgacchati)

Vidū—ah dāṇiṃ dāṇiṃ ! kīdāvā ahaṃ bhaṇāgāṇaṃ [2] gaṇa pāṇāṇi (iti yavanīkā-kṛtarīṭaḥ sarī-vesaṃ kṛtvā niṣkrāntaḥ) tad-evaṃ=anyathā saṃgrāma-nyāyaḥ cintyatāṃ sarī-vesaḥ sādhanaṃ=a pāgatam=iti !

(From the *Nāṭyadarpaṇa*)

G

(i) II 32 (trigata, p. 214) bhūmnaḥ prasiddā=anyasya trigunāt=anek-kṛtha-gaṇam ! Triśāṭakaḥ=anekārthatvāt tena dvyarthaṃ=api ! Yathā Devī-Candragupte dvitīye 'ṅke prakramaṃ=nirvartayitvā Śakasya Dhruvadevī-saṃpradāne abhyupagate rājñā Rāmagupta=ādvādhanārthaḥ[1] yuktaḥ pratipannaḥ - Dhruvadevī sapatnyāḥ Kumāra - Candragupte vijñapayaṃs '=ucyate yathā.

Pratiṣṭh=ottiṭṭha ca khalv=ahaṃ tvāṃ parityaktuṃ ālasāt !
Pratyagra yauvana-vibhūṣaṇaṃ=ālagaṃ=etad
Rūpe-śrīyaḥ ca tava yauvana-yogya-rūpāṃ !
Saktiṃ ca mayy=anupamāṃ=anurudhyamānāṃ
Devīṃ tyajaṃt balavataḥ=tvayi na 'turāgaḥ ||

---

[1] Read "vadhārthaṃ

[2] Read vijñāpa-'

Anya-stri-jankayā Dhruvadevī

Yadi bhattiṇa ovekkhasi tado maṇa maṇiva'da)bhāsai paricchayasi !

Rājā:

api ca

tyajāmi devīṃ tvadavasthāṃ tvad-antare

Dhruvadevī

ahaṃ pi jīvidaṃ pariccayāmi ajjuttaṃ paḍhamaṃ pavvaiyaṃ pariccayāmi !

Rājā

eṣheti devīṃ prati me dayālutā !

Dhruvadevī:

iyaṃ ajjuttassa idha dayālutā jaṃ avavvaddho jaṇo aṇugadā evaṃ pariccayadi !

Rājā

tvayi sthitaṃ sneha-nibandhanaḥ manaḥ !

Dhruvadevī:

ado ppeva maṇḍabhāgā parichchāyāmi !

Rājā:

tvayy=upāropita-premā tvad arthe yadasā sadā !
parityaktā mayā devī jano 'yaṃ jana eva me ॥

Dhruvadevī

hañje iyaṃ ṇa ajjuttassa karuṇadā !

Śūradevī

devī paḍihāi ṇaṃdā maṇḍalā chuḍalla kiṃ etha karīyadi !

Rājā

devī-viyoga-duḥkhārttasya=tvam=asmān rakṣayiṣyasi !

Dhruvadevī

vvogadukkhaṃ pi de akaṇṇassa atthi ṇeva !

Rājā

tvad-duḥkhasy=ākarṇayataḥ sa śat-āraṇa=api na kṣhaṇa ॥

iti ! Etat strī-vyādhāra-Candragupta-bodhanārthaṃ=abhihitam=api viśeṣeṇa[1]=eva Dhruvadevyā strī-viṣayaṃ pratipannam=iti bhāvārtha-yojakam !

---

[1] Read viśeṣaṇa !

H

And also I. 46 (rodha, p. 94): kṛtiḥ khedo vyasanam=iti śrī-rodhaḥ | yathā Devī-Candraguptē Rājā Candraguptaḥ = āha:

tvad-dukhasy=āpanetuṃ sa ātmānam api na kṣamaḥ |

Dhruvadevī sūtradhāram = āha |

kanye iyaṃ sā kiṃ cikitsayā karoṣi-parikhinadā |

Sūtradhāraḥ

devī padantī candramaṇḍalam vi cañcalā kim u sā karomi |

Rājā

tvayy=upāhita-prītiḥ tvad arthe yāpyā saha
parityaktā mayā devī jano'yam jana eva me ||

Dhruvadevī |

ahaṃ api jīvidaṃ parityajāmi gadhanapāraṃ yeva tumaṃ paricassāmi |

atra antaraṃ nibhṛte Chandragupte priyavacanāḥ śrī-pratyayāt Dhruvadevyā guru-manyu-santāpa-rūpasya vyasanasya anuprāptiḥ |

I

(1) Ca. I, 32 (prārthanā p. 114) bhāvanāyāṃ sādhya-phalocitāyāṃ yat harṣa otsav-ādīnāṃ yācanam prārthanā yathā Devī-Candraguptē caturthe ṅke

Chandraguptaḥ priye Mādhavasena tvaṃ dhanāni me bandhanam=ājñāpaya |

kaṇṭhe kiṃnara-kaṇṭhi bāhū latikā-pāśāḥ samāsajyantāṃ
bhāsa=te mama-bandhavo mama balāt baddhāstu pādi-dvayam |
pādau tvaj-jaghana-sthalī-prasayinau saṃdhārayet=ā-mekhalā
prāṇāḥ tvad-guṇa-baddham=eva hṛdayaṃ bandhaṃ punar=ā-gihati |

atra yatoh prārthanā |

J

II, 2 (prakaraṇa; p. 168) yathā ca veśyāyāṃ asyāḥ śrī-vijayā-sahitam=api ceṣṭitaṃ nibodhyate | Yathā Viśākhadatta-kṛte Devī-Candraguptē Mādhavasenam samuddiśya Kumāra-Candraguptasy=oktiḥ:

[illegible]-śirīṣalaḥ sat-otpala-ruchiḥ = śhadhnaiḥ nataṃ yoh
pratyaṅgeṣu varāsāne pulakṣa sveda sambhavaiḥ
kurvāṇeṣu nitambayor = upachayaṃ sarpūrayor = apy
= asau

ken = āpy = upadat = āpy = adho bhavasana-granthis = tav =
echa-sitaḥ ॥

iti ।

K

(2) IV, 2 (Dhruva, p. 319) . yathā vā Devī-Candragupte
pañcame 'ṅke

eṣa sya-kara-vitthara-paṅkiy-āsa-vera-tiṇir-eho ।
āsya-viha-vareṇa cāndo gayaṇaṃ guha-laṅghio vasā ॥

iyaṃ sv-āpya-śaṅkinaḥ kṛtak ānattasya Kumāra-Candra-
guptasya cauḍī-odayn-varṇanena pravesa-prabandhik-eti ।

Aṅk-śate 'ṭhā-ṣaḍhiye vā sa-ninuttaṃ raṅgaṃ pāṭrasya
bahu = ālāsaṇaṃ aṅkaṇaṃ tat-prayojanaṃ aṇaḍa(ḍ)ikādier
= ākṛṭṭaṇatvād ikaṇy = ādhāya-pad-avviddhau aṅkāvatāri
yathā Devī-Candragupte pañcam-aṅk-śāte

hāravīra-kaṇṭa-vāsaḥ aṅgīkṛtaṃ aṅhavai mayāsīta ।
nibhṛtaḥ śhuddha-chitte sāmaṃ tāṇ māṇo muṇo ॥

iyaṃ = aṃnattasy Candraguptasya madana vikāra-gopana
parasya mānāk śaṃ bhitasya rājakula-gamana ārthaḥ aṅkrāṇa
sūcaketi ।

L

Ibid. (krama; p. 116): bhāvasya par-ābhiprāyasya = āthavā
bhāvyamānasy = ārthasy = ca pratibhāḍi-vaśāt = ārūṇyo yathā
vasthita-rūpa-nāṭayaḥ kramaḥ buddhiḥ = yatra kramate sa
pratibhāyate ity = arthaḥ । yathā Devī-Candragupte Candra-
gupto Dhruvadevīṃ ārabhya svagatam = āha

iyaṃ = api devī tiṭṭhati y = āsīna

ramyaṃ cā = ātikāriṇī ca karuṇā-dokena atti dāsīṃ
tathā-opagatena rāhu-śirasā gupt = eva candrī kalā ।
pāvaḥ bhīha jan-ācīrṇa carāṭena vasena puraḥ sato
lajjā-kopa-viṣāda-bhīty-arathibhiḥ kṣhetrīkṛtaṃ tāmyate ॥

atra Dhruvadevyā-abhiprāyasya Candraguptena saṃ ayaḥ ।

(From the *Kavya-mālā* p. 47)

M

Datvā ruddha-gaṭāḥ Khas-ādhipataye devīm Dhruvasvāminīṁ
yasmāt khaṇḍita-sāhasā nivavṛite Śrī-Śarma(rma)-gupto nṛpaḥ ||
tasmin=eva Himālaye guru-guhā-kuṇḍa-kvaṇat-Kinnare |
gīyate tava Kārttikeya-nagare strīṇāṁ nṛpaḥ kīrtayaḥ ||

(From the Sanjān copper-plate grant, *Ep. Ind.*, Vol. XVIII, p. 248, v. 48.)

N

Hatvā bhrātaraṁ=eva rājyaṁ=abhavad-devyā ca dīnas=tathā
lakshaṁ kīṭaṁ=alekhayan kila kalau dātā sa Gupt-anvayaḥ |
yenāyaṁ tasmāt sva-rājyaṁ=asakṛd=vākya-ārthakaiḥ ka
kathā
hṛts=tasy-ānusti-Ka śrīrakuta-tilaka dāteti kīrtyaṁ=api ||

D. R. BHANDARKAR

SOURCES OF PROPERTY UNDER HINDU LAW

There are two important texts bearing on this question

(A) Manu, 10. 115.

सप्तविधायाः पत्नीनां दायादा बान्धवाः स्मृताः ।
लाभोऽन्वयागमः क्रीतं प्रसादः सत्प्रतिग्रहः ॥

There are seven lawful sources of Property —Inheritance, Acquisition, Purchase, Conquest, Investment, Industry (Trade and Agriculture), and Rightful Gift —(Quoted in *Mitakṣara*, p. 604, *Parāśara-mādhava*, p. 330, and *Vīramitrodaya*, p. 537, *Smṛitsāra* II, p. 350, *Vidhānapārijāta* II, p 245, in Hemādri, *Dāna*, p 4t.)

The seven terms used here have been explained as follows :—

'Dāya' stands for property coming to a person by reason of his relationship—'Lābha,' for 'Acquisition' (*a*) of buried treasure and such things, or (*b*) the share that one obtains out of the property acquired by one's father and other relations, though this also would be *inherited*, yet it cannot be spoken of as 'inheritance', 'Dāya,' because it belongs to several persons in common; or (*c*) 'Lābha', 'acquisition', may stand for those loving presents that one receives from friends or from the father in law—'Jaya,' conquest in battle —'Prayoga' is money-lending —'Karma yoga' stands for trade.—The legality of these means of acquiring property depends upon the caste of the person concerned The first three—Inheritance, Acquisition and Purchase—are common to all men, Conquest is for the Kṣatriya only, Money-lending and Trade for the Vaiśya only and Rightful Gift for the Brāhmaṇa only. According

to some people 'jaya' stands for winning at gambling; but this is not right, as gambling cannot be regarded as a 'lawful' means of acquiring property.—(Medhātithi.)

'Dāya' is property acquired by reason of relationship. 'Lābha' is coming by buried treasure, or having presents from some persons.—These three are 'lawful' for all the four castes. 'Jaya,' in battle, is 'lawful' for the Kṣatriya, and Money lending and Agriculture and Trade are 'lawful' for the Vaiśya;—'Rightful Gift' is 'lawful' for the Brāhmaṇa only. (Govindarāja.)

'Dāya' obtaining, by partition, of property belonging to one's father and others.—'Lābha,' finding, by chance, of hidden treasure.—'Kraya,' obtaining, by means of what already belongs to one, lands and other properties. 'Jaya,' obtaining, by means of fighting.—'Prayoga,' augmenting one's belongings by means of art, trade and other means.—'Karmayoga,' obtaining wages by means of art and other means.—'Satpratigraha' is the accepting of such pure gifts as are not forbidden, from persons of pure character. The first three are for all men, 'Jaya' for the Kṣatriya, 'Prayoga' for the Vaiśya, 'Karmayoga' for the Śūdra, and 'Pratigraha' for the Brāhmaṇa.—(Sarvajña-nārāyaṇa.)

'Dāya' and the rest are the seven sources of property, which are 'lawful,' *i.e.*, in accordance with one's rights.—'Dāya' is property obtained by reason of relationship.—'Lābha' is obtaining hidden treasure or friendly presents. The first three are lawful for all the four castes.—What is obtained by conquest is lawful for the Kṣatriya only.—'Prayoga' stands for agriculture and trade. These two are lawful for the Vaiśya.—'Satpratigraha' is lawful for the Brāhmaṇa.—(Kullūka.)

'Sources of property,'—*i.e.*, means of acquiring wealth; 'Lawful' not illegal.—'Dāya,' obtaining, by partition, the property of one's father and others.—'Lābha,' acquiring of

hidden treasure and such things —'Kraya,' obtaining things by purchase or exchange.—'Jaya', in gambling or in battle.—'Prayoga,' investing money on interest.—'Karmayoga,' trade and agriculture —The first three are common for all the four castes 'Jaya' is peculiar to the Kṣatriya; so are 'money-lending' and 'trade and agriculture' to the Vaiśya; and 'rightful gift' to the Brāhmaṇa —(Rāghavānanda.)

This text describes the seven means of acquiring property, for the Brāhmaṇa in normal times.—'Lawful,' i.e., permissible in normal times 'Lābha,' obtaining of hidden treasure.—'Kraya,' the purchase of lands and other things. —'Jaya' is victory over an opponent in debate.—'Prayoga' is teaching —'Karmayoga', officiating at sacrifices.—'Satpratigraha' is receiving gifts from pure twice-born persons. (Nandana)

'Dāya' is one's share in the father's property.—'Lābha,' obtaining of hidden treasure.—'Jaya', obtaining in war.—'Prayoga,' augmenting one's wealth by art, trade and such means —'Karmayoga,' by means of arts and crafts —(Rāmacandra.)

'Prayoga,' investing money for profit.—'Karmayoga' is officiating as a priest at sacrifices. The first three are lawful for all the four castes , 'Jaya' is lawful for the Kṣatriya, and 'Prayoga' for the Vaiśya and also for the Śūdra , and 'Karmayoga' for the Brāhmaṇa only.—(*Vīramitrodaya*, pp 537-538)

'Dāya' is what has come through relationship; 'Lābha' is finding of treasure-trove and such things,—'Jaya' is conquest of war, 'Prayoga' is money lending on interest ;—' Karmayoga' is trade and agriculture.—(*Smṛtitattva* II, pp 350-351)

'Prayoga' is monetary transaction for earning interest ,—' Karmayoga' is officiating as priest at sacrifices.—(Hemādri-*Dāna*, p. 41.)

(B) (Gautama 10. 39- 42.)

स्वामी ऋक्थसंविभागपरिग्रहविजयेषु ब्राह्मणस्यैकैकं लब्धम् क्षत्रियस्य विजितम्, विशि ईहितमुत्पन्नं च ॥

A man is an owner when there are Inheritance, Purchase, Partition, Finding and Trover;—in addition to this, there is Gift for the Brāhmaṇa,—Conquest for the Kṣatriya,—and Earning for the Vaiśya and Śūdra.—(Quoted in Aparārka, p 729, *Mitākṣarā*, pp. 314, 592 and 601, and *Parāśaramādhava*, p. 329.)

These terms have been explained as follows:—

'Saṁvibhāga,' 'Partition,' is here laid down as creating ownership.—(Aparārka, p 729.)

'Ṛiktha' is inheritance, direct and unobstructed[1];—'Saṁvibhāga' is inheritance, indirect, 'obstructed'—'Parigraha' is finding, in the forest and such places, of such things as wood, grass and the like, not belonging to any person;—'Adhigama' is finding of treasure trove and such things.—'Lābha' is an additional source of property peculiar for the Brāhmaṇa, what is acquired by possession or as 'wages' is peculiar for the Vaiśya, and what is acquired by serving the twice-born is peculiar for the Śūdra.—(*Subodhinī* on *Mitākṣarā*, p 315.)

The sources of property mentioned here are common to all men. 'Ṛiktha,' stands for 'unobstructed' or direct Inheritance; 'Saṁvibhāga' for 'obstructed' or indirect inheritance,—'Parigraha' is the obtaining of such water, grass and fuel and the like as have not belonged to any one else, 'Adhigama' is finding a treasure-trove and such things;—where these conditions are present, the man becomes the 'owner', i. e., he comes to be regarded as the 'owner' only when the said conditions are actually perceived to be present.—The source peculiar to the Brāhmaṇa is what he obtains by way of gift, this is in addition to those enumerated above;—the 'source' peculiar to the

Kṣatriya is *conquest, imposition of fines* and so forth, to the Vaiśya, what is earned by agriculture, cattle-tending and so forth;—to the Śūdra, what is earned as wages for serving the twice-born. This last includes all those earnings that are made by people of the 'mixed' castes, for whom such professions have been prescribed as 'chariot-driving' for the Sūta and so forth.—(*Mitākṣarā*, pp. 691-692.) [These two—'Parigraha' and 'Adhigama' correspond to 'Lābha' of Manu.]

'Ownership' being purely temporal, what this text does is to indicate that peculiar transcendental results accrue to the Brāhmaṇa if he restricts his acquisitions to 'gift' only,—to the Kṣatriya if he restricts it to 'conquest' only and so forth.—(*Parāśaramādhava*, p. 329.)

Manu has enumerated the sources of property for all men, making no distinction in reference to castes. Gautama, however, makes Inheritance, Purchase and Acquisition only common to all castes, he reserves 'Conquest' for the Kṣatriya (though Manu retains it for all),—'Earning' for the Vaiśya and Śūdra only (though this is included under 'Prayoga' and 'Karmayoga' of Manu which are common to all),—and 'Gift' for the Brāhmaṇa only (though in Manu this also is in the common list).—It is interesting to note, however, that the commentators of Manu, from Medhātithi downwards, have applied Gautama's distinction to Manu's text also.

GANGANATHA JHA

ANCIENT INDIAN EDUCATION AS DESCRIBED IN THE SMRITI TEXTS

The pupil's first introduction to education was made by the performance of a ceremony called *Vidyārambha* at which the children of all castes were to commence the learning of the alphabet for the first time. The age fixed for this was five for all castes alike.[1]

The formal and regular introduction to education was however made by the ceremony of *Upanayana* which was ordained for all the castes,[2] Brāhmaṇa, Kṣattriya and Vaiśya, though under different rules. Members of these castes however who had committed bad actions as also the Śūdras were not eligible for this ceremony.[3] The significance of this law in pointing to compulsory education for the majority of the people, which was certainly made up by the first three castes, should not be missed. In this connection it is interesting to note that Baudhāyana [*Gr. Sū.* II, 5 8-9] alone among our law-givers admits the Śūdra Rathakāra to the ceremony of initiation. He says "Let him initiate a Brāhmaṇa in spring, a Kṣatriya in summer, a Vaiśya in

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[1] संवाहो पंचमे वर्षे कलाभ्युहो गतादिने ।
एष बुद्धिविधौ कार्यो विद्यारम्भस्तु कारयेत् ॥

(*Vṛddharmottara*)

शुभे नक्षत्रे दिवसे शुभे वारे दिनाद्ये ।
संस्थाप्य पुत्रं देवेशान् कृत्वा कार्यं वाचयेत् ॥

(*Nandipurāṇam.*)

No evidence regarding the Vidyārambha ceremony is however to be found in the authoritative Sūtras.

[2] *Āpastamba Dh.* I, 1, 1, 6.

[3] Ibid.

autumn, a *Rathakāra in the rainy season*, or all of them in spring." Baudhāyana is connected by this with the traditions of an earlier age. The ancient Vedic ritual in certain cases admitted Śūdras and particularly, the Rathakāra or carpenter who, according to all accounts, had Śūdra blood in his veins, to a participation in the Śrauta rites.

The *Taittirīya Brāhmaṇa* even gives certain Mantras to be recited by the Rathakāra at the Agnyādhāna sacrifice. Baudhāyana [Dh. Sū. I, 9, 17, 6] defines the Rathakāra as the offspring of a Vaiśya male and Śūdra female and the hostility shown against the mixed castes and the exclusion of the carpenter from the privilege of initiation (which is an expression of that hostility) as shown in the works of the Sūtrakāras like Āpastamba, are to be regarded only as the outcome of the doctrines of later ages.

The rules of initiation vary with the castes. The Brāhmaṇa is to be initiated in spring, the Kṣatriya in summer and a Vaiśya in autumn.[1] The age limits[2] for the Upanayana are 8—16 for the Brāhmaṇa, 11—22 for the Kṣatriya and 12—24[3] for the Vaiśya. Some variations in the age-limits are however given in a few of the Sūtras. Śāṅkhāyana gives either eighth or tenth year as the age of admission to education for a Brāhmaṇa [II, 1, 3]. Hiraṇyakeśin fixes it at the seventh year [I, 1, 1, 2]. Pāraskara mentions the eighth year or the eighth year after the conception [II, 2, 1] but also leaves it to be determined by the families of the pupils according as it is con-

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[1] *Āpastamba, Dh.* I, 1, 1, 19; *Hiraṇyakeśin*, I, 1, 1, 4; *Baudhāyana Dh.*, I, 2, 3, 10.

[2] *Āpastamba Dh.* I, 1, 1, 27; *Gautama* I, 5, 11; *Śāṅkhāyana* II, 1, 1; 4; 5, 4—6; *Āśvalāyana* I, 19, 1—3 ?; *Pāraskara* II, 2, 1—3; 5, 36; *Gobhila* II, 10, 1—4; *Khādira* II, 4, 1—5; *Hiraṇyakeśin* I, 1, 1, 2-3; *Āpastamba Gr.* IV, 10, 1—3; *Baudhāyana* I, 2, 3, 7—9 12; *Viṣṇu* XXIII, 15—17, 26.

[3] Always calculated from time of conception.

sidered auspicious by them [II, 2, 4]. Gautama mentions as the maximum age the twentieth year for a Kṣatriya and twentysecond for a Vaiśya [I, 13 14] while as the minimum age of initiation for a Brāhmaṇa, he mentions the normal one of the eighth year as also *sixth* and *fifth* ' for the fulfilment of some particular wish ' of the father [I, 5, 6]. This wish is explained by Manu as the wish to attain special proficiency in the respective pursuits of the different castes For a Brāhmaṇa who aspires after divine glory and spiritual pre-eminence or sanctity resulting from proficiency in sacred learning [*brahmavarcasakāmasya*] the initiation should take place in the fifth year, that for a Kṣatriya who wants to become strong and powerful [*balārthinaḥ*] in the sixth, and that for a Vaiśya who longs for great success in agricultural and mercantile pursuits [*arthinaḥ*] in the eighth year [II, 37]. The 'wish' is however elaborately and somewhat differently defined by Āpastamba [I, 1, 1, 21—26]. For those aiming at special spiritual excellence ['*brahmavarcasakāmesu*' as in Manu] he fixes the seventh year, for those aiming at longevity' [*āyuṣkāmam*] the eighth year; for physical vigour' [*balakāmam*] ninth year; for livelihood [*jīvikākāmam*] tenth year; for vital force' [*indriyakāmam*] eleventh year, and for prosperity in cattle [*paśukāmam*] twelfth year.

It will appear that there are two principles assumed in determining the age-limits of instruction for the different castes. In the first place, the Brāhmaṇa begins his education at the earliest age and this may be for two reasons: he attains intellectual eligibility earlier than the boys of other castes and he has also to undergo a far more

[1] Are the later ages fixed for considerations of bodily health and vigour, considerations which still determine the matriculation age-limit in modern universities?

extended and deeper course of study and discipline. With regard to the pupils of other castes the period of their theoretical studies or mere book learning must be much shorter than that of Brāhmaṇas so that they may take to their respective professions in the practical spheres of life in the ages most suitable for the purpose. It may also be noted that the age of seven (according to our reckoning) at which the Brāhmaṇa begins his education is also the age recommended by modern educationists.

The spiritual significance of the ceremony of initiation as indicated in the sacred texts cited above is also followed out in the Sūtras. Manu explains it thus "Of him who gives natural birth and him who gives the knowledge of the Veda, the giver of the Veda is the more venerable father . . that birth which a teacher . . procures for him through the Sāvitrī is real, exempt from age and death." [II, 146, 148.] The same sentiment is repeated by Vasiṣṭha [II, 3] and Viṣṇu [XXX, 44—46] (the new existence acquired by his initiation in the Veda). Āpastamba expresses it thus: "He (Ācārya) causes him (pupil) to be born a second time by imparting to him sacred learning. This second birth is the best." Gautama also says "That (initiation) is the second birth" [I, 8.] Baudhāyana also refers to the 'second birth through the Veda,' [I, 2, 3, 6] and to a Brāhmaṇa having two births [I, 11, 21, 14]. The preceptor is thus the spiritual father, to whom the care of the pupil's mind and spirit is committed after his body is duly nursed by his natural parents and made fit for his transfer to a new home and environment congenial to his spiritual growth.

The obligation for men of the three twice born castes to get themselves initiated at the proper ages could not be violated with impunity. Those who violated such obligatory injunctions earned for themselves the degrading

title of *Patita-Sāvitrīkās* (i.e., men who have lost their right of learning the Sāvitrī) and were not admitted to the privileges of initiation, teaching, religious and social intercourse [*Śāṅkhāyana Gṛ. Sū.* II, 1, 9—13, *Mānav.* I, 19, § 9, *Pārask.* II, 5, 39-40, *Vas.* XI, 74-75, *Gobhila* II, 10, 5-6] According to Manu they are to be designated "Vrātyas (outcastes) excluded from the Sāvitrī (i.e., initiation) and despised by the Āryas." With such men there could be no "connection either by marriage or through the Veda." [II, 39-40, X, 20.]

Such defaulters were not however past redemption. They were reclaimed by performance of certain prescribed penances Āpastamba [I, 1, 1, 24] makes the penances to be the observance of all the restrictions ordinarily imposed upon a student such as chastity, etc, for the space of two months. Viṣṇu [LIV, 26] prescribes three Prājāpatya penances and applies the designation *Vrātyā* to the uninitiated [LVII, 2] Vasiṣṭha prescribes Uddālaka penance which means subsisting for two months on barley-gruel, one month on milk, some days on alms given without asking and so forth [XI, 76-77]. Manu also prescribes the performance of three *Kṛcchra* penances [XI, 192] Lastly, Gautama expressly mentions the guilt of those who allow the time for initiation to pass as a minor offence [XXI, 11]

Considering the severity of the penances and penalties attaching to the violations of the obligation of initiation by men of all the three castes, it is apparent that the institution practically worked as a compulsory system of universal education in the ancient Hindu social polity The uninitiated were treated as outcasts who were denied all the benefits of social life and deemed even unworthy of matrimonial connections. A high degree of universal literacy was thus very early recognised in ancient India as one of

the first cares and objectives of society which was the real governing authority in such communal affairs. We must also recognise the catholicity and toleration of these early law-givers who, while condemning most severely the violation of this elementary duty that rests upon man to educate himself, yet make the way easy and smooth for such sinners to mend themselves through a course of rigorous external discipline giving expression to an inner feeling of repentance including 'confession of error and promise of amendment'

We shall not go into the details of this primary ceremony of Upanayana and bring out its full educational significance.

Firstly, with regard to the meaning of the term *Upanayana*, the element *Upani* does not imply the introduction to a teacher of a student by his father or any other relation. The texts clearly point to a different translation and imply the introduction of the student to *brahmacarya* by the teacher himself The student enters upon (*upaiti*) the *brahmacarya* or enters with (*upeta*) the teacher: he who has thus entered upon studentship is consequently designated as *upeta* [*Śaṅkh.* IV, 3, 1, *Parask.* III, 10, 10] In that sense the word *Upayana* [Mānava Gr. I, 22] is sometimes used for the more usual term *Upanayana* The sense is further confirmed by two passages in the *Śatapatha Brāhmaṇa*. In one [XI, 5, 3, 13] Śaucheya says to Uddālaka Āruṇi " I will enter as a student with the reverend One (Upayāmi bhagavantam.)" Āruṇi replies: " Come, enter (with me) (*ehyupehi*)," and he initiated him (*tam hopanināya*). In the other passage [XI, 5, 4, 16] it is stated that according to some, a teacher who has initiated a Brāhmaṇa as a student (*brāhmaṇam brahmacāryam upanīya*) should abstain from sexual intercourse, for a student who enters upon

studentship (*yo brahmacaryam upaiti*) becomes as it were a *garbha*.[1]

Elaborate details are given in the books for the proper performance of the ceremony. We shall select such as are more interesting. There are four special external marks prescribed for the brahmacārin when he is about to be initiated. These are (1) *garments* of which the material and colour vary with the caste, (2, 3) *skins*, and *girdles* also varying with the castes, and (4) *staves* of which the material and length vary with the castes.[2] It may be noted that the material of the girdle seems to be determined with reference to the distinctive occupations of the different castes. It is Mūñja grass for the Brāhmaṇa, bowstring for the Kṣatriya (symbolical of his military avocation) and woollen thread for the Vaiśya. There is also a special spiritual significance behind these external marks. The symbolism of the *garment* is thus explained by Pāraskara [II, 2, 7] 'In the way in which Bṛhaspati put the garment of immortality on Indra, thus I put (this garment) on thee for the sake of long life, of old age, of strength, of splendour.' According to Hiraṇyakeśin who extends still further the scope of this symbolism, the student puts on the garment that he may be clothed 'with long life, with increase of wealth and be a protector of human beings against imprecations.' [I, 1, 4, 2-3.] There is again a symbolism in the girdle which is put round the waist of the boy with the following verse: 'Here she has come to us, who drives away sin, purifying our guard and our protection: this blessed girdle.' [*Hiraṇya* I, 4, 4] Gobhila also regards

[1] This note is based on that of Oldenberg in S. B. E. XXIX, p. 58.

[2] *Sāṅkh.* II, 1, 1f, 15f, II, 13; *Āśval.* I, 19, 10f; *Pāraṣk.* II, 5, 16f; *Gobhila* II 10, 8f; *Hiraṇya.* I, 1, 12; 4, 7; *Āp. Gr* IV, 10, 10, 11, 15, 16.

the girdle as the girdle of protection [II, 10, 37] as well as Pāraskara [II, 2, 8] and Śāṅkhāyana [II, 2, 1]. As regards the symbolism of skins we have an indication in a passage of Āpastamba [*Dh. Sū.* I, 1, 3, 9]: 'He who wishes the increase of Brāhmaṇa power shall wear skins only, he who wishes the increase of Kṣatriya power shall wear cloth only, he who wishes the increase of both shall wear both' [cf. *Gautama Dharmasūtra* I, 2, 4]. Hiraṇyakeśin [I, 1, 4, 6] calls the skin 'a chaste, mobile vesture'. Pāraskara [II, 2, 12, 13] indicates the symbolism of the staff too which the student takes up 'for the sake of long life, of holiness, of holy lustre' or because he enters upon a long *satra*' [cf. *Śat. Br.* XI, 3, 3, 2; *Hiraṇyaka. Śr. Sū.* VII, 4, 1—4].

When the intending pupil is thus properly dressed, he has to satisfy some preliminary queries put to him by the teacher before he initiates him. The first query was as regards his name and lineage. The second asked him to declare formally that he wants admission as a disciple. The form of the declaration is thus prescribed by Hiraṇyakeśin [I, 2, 5, 2]: "I have come hither to be a student. Initiate me! I will be a student, impelled by the God Savitṛ." Pāraskara makes the teacher ask the pupil 'Whose pupil art thou?' And the pupil answers 'Yours' [II, 2, 19, 20]. The object of this was probably to make the pupil promise that he would abide by the rules of *Brahmacarya* upon which he would be presently entering. According to Viṣṇu [XXIX, 5, 9, 10] the teacher must not admit to his teaching one whom he does not know. There are also laid down certain moral conditions qualifying a pupil for admission. 'He must not be a scorner, a wicked man or one of uncontrolled passions; he must be pure, attentive, possessed of a good memory and chaste, who will not grieve nor revile the teacher, to whom the sacred knowledge can be revealed as to a keeper of

one's gain.' [Cf. Manu II, 109 (ten persons eligible for Vedic instruction), 112—115.]

The student is then committed to the charge of the gods with prayers varying also with his caste. The Brāhmaṇa is committed for the sake of great learning, the Kshatriya for great royalty, and the Vaiśya for great wealth [*Hiraṇya.* I, 1, 4, 3.] According to Śāṅkhāyana [II, 2, 13-14] "those who are desirous of a host of adherents should be initiated with the verse, 'Thee, the Lord of Hosts' [Rv. II, 23, 1]" and "warriors with the verse. 'Come here, do not come to harm' [Rv. VIII, 20, 1.]"

Some of the prayers used in the performance of the ceremony indicate the *objects of education.* They are both religious and secular, and such as are necessary for the harmonious development of a man's nature. The pupil prays to the gods for insight, offspring, splendour, strength and vigour [*Āśval.* I, 21, 4.] According to Śāṅkhāyana he prays for long life, offspring and strength, increase of wealth, mastery of all the Vedas, fame and bliss. Pāraskara [II, 4, 3] makes him worship Agni with the following poetic prayer: "To Agni have I brought a piece of wood . . As thou, Agni, art inflamed by wood, thus am I inflamed by life, insight, vigour, offspring, cattle, holy lustre." Hiraṇyakeśin [I, 2, 5, 13] has the prayer for offspring, valiant sons, splendour, wealth, wisdom, and pupils (for the student must develop into a teacher and help toward the spread of learning). There is also a special prayer for intelligence [I, 2, 6, 4]. He has also a similar prayer to Agni: 'As thou art inflamed, Agni, through that piece of wood, thus inflame me through wisdom, insight, offspring, cattle, holy lustre and through the enjoyment of the good' [I, 2, 7, 2.]

The teacher's formal acceptance of the pupil is made with the following words which indicate the sacred and inviolable character of the spiritual bond that connected them. "Thy heart shall dwell in my heart, my mind

thou shalt follow with thy mind, in my word thou shalt rejoice with all thy heart, to me alone thou shalt adhere; in me thy thoughts shall dwell, upon me thy veneration shall be bent, when I speak thou shalt be silent." [*Hiraṇ. gṛ.* I, 2, 5, 11, *Śāṅkha.* II, 4, 1, *Pāraṣk.* I, 8, 8 (formula for marriage), *Āśval.* I, 21, 7.]

The ceremony of initiation concludes with the following charge laid upon the Brahmacārin. "A Brahmacārin art thou! Drink water! Do the service. Do not sleep in the day-time. Be devoted to the teacher. Study the Veda" [*Āśval.* 1, 22, 3.] Śāṅkhāyana [II, 45] adds the further duty—'Put on fuel!' [Cf. *Pāraṣk.* II, 3, 2, *Gobhila*, II, 10, 34, *Hiraṇy.* I, 2, 5 11]

The period of studentship or *Brahmacarya* begins with what is called the *Sāvitra vrata*. Brahmacarya practically means the observances which the student has to keep through certain periods of time before the different texts which he has to learn can be taught him. Thus the study of the Veda is opened by the Sāvitrī [cf. *Śat. Br.* XI, 5, 4, 6 f]. The Brāhmaṇa student is to be taught the Gāyatrī which belongs to Viśvāmitra [Ṛv III, 62, 10]; the Kṣatriya is to be taught the *tryaṣṭubh* as ascribed to Hiraṇyastūpa [Ṛv. I 35 2]; the Vaiśya is to be taught the Jagatī which is a verse ascribed to Vāmadeva [Ṛv IV, 40, 5] or to Hiraṇyastūpa [Ṛv 1, 35 9]. The *Sāvitra vrata* observed as a preparation for that instruction might last for one year or three days or the Sāvitrī can be taught immediately after the initiation. [*Sankh.* II, 5, 1—6; 7, 11] According to *Pāraskara* [II, 4, 3, 6] the *Sāvitra vrata* may last for one year, six months, twenty-four days, twelve days, six days or three days [For teaching the Sāvitrī cf. *Gobhila* II 10, 39, *Hiraṇy.* I, 2, 6, 11, *Āp. Gṛ.* IV, 11, 9 f, *Kh.* II 4, 20, *Āśv.* I, 21, 5 f, 22, 29] The normal time for this, the first of the Brahmacārin's vratas or special observances, seems

to have been three days. During this time the student had to live on special food which was not to be either pungent or salted or milk according to Khādira [II, 4, 32] and to beg that food firstly of his mother and 'of two other women friends or of as many as there are in the neighbourhood' [*Gobhila*, II, 10, 43] or 'other houses where they are kindly disposed towards him' [*Hiraṇya* I, 2, 7, 17] or of a 'woman who won't refuse' [*Śāṅkh.* II, 6, 6, *Āśv.* I, 22, 7] or from three women who will not refuse or from six, twelve or an indefinite number [*Pāraśk.* II, 5, 8, 6]. Manu [II, 50] makes the pupil beg food first of his mother, then of his sister, then of his own maternal aunt and then of a female who will not disgrace him by a refusal. The alms were to be collected in a bowl given to the pupil by his teacher. [*Hiraṇya* I, 2, 7, 14.] After the lapse of these three days of observing the Sāvitrī *vrata*, the student ship formally begins under prescribed conditions governing the life and studies of the pupil dwelling in his teacher's house.

The restrictions as regards food are withdrawn and the student is allowed to eat pungent and saline food and vegetables [*Hiraṇya* I, 2, 9, 9]. Manu forbids the taking of honey, meat, substances used for flavouring food and substances turned acid [II, 177, cf. *Baudh.* I, 3, 23-24, *Pāraśk.* II, 5, 12, *Gobhila* III, 1, 17, 19, 23]. According to Āpastamba, also, the Brahmacārin shall not eat food offered at a sacrifice nor pungent condiments, salt, honey or meat [I, 1, 2, 2, 23, I, 1, 4, 6]. Āpastamba, appealing to the Mīmāṁsaka, combats the doctrine implied in the injunction of Baudhāyana that pupils may eat forbidden food, such as honey, meat and pungent condiments if it is given to them as leavings by their teacher. For the general rule is that students should eat the fragments of food given to them by their teachers, and are to obey their teachers except when ordered to commit crimes which

cause loss of caste and such crimes, according to Baudhāyana, did not include eating forbidden food. Gautama [II, 13] prohibits honey and meat. The *hour* of eating is also prescribed: it is the fourth, sixth or eighth hour of the day [*Vasiṣṭha*, VII, 8]. The *manner* of eating is thus laid down: 'He shall eat in silence, contented and without greed' after receiving permission to eat from his teacher [*Gautama*, II, 31, 41]. Manu prescribes eating with a concentrated mind, a pleased face and without contempt, after meditating on the food as the sustainer of life, and forbids eating between the two meal times, over eating, and giving to any man the food that is left. [II, 53—57 cf. *Baudh.* II, 3, 5, 21 II, 12 7, 9, II, 13 11, *Gaut* IX, 59 *Vasiṣṭha* LXVIII, 34-35; 42-43; 48, *Vaiṣṇava* III, 69, *Āp.* II, 1, 2-3] Āpastamba requires the pupil to clear his dish after he has eaten [I 3, 36].

One of the standing duties of the Brahmacārin was to go out *begging* for alms. Generally, the women were approached for alms and were to be addressed in prescribed terms varying according to the caste of the begging student. A Brāhmaṇa is to use the word 'Lady' at the beginning, a Kṣattriya in the middle, and a Vaiśya at the end, of the sentence prescribed for asking alms [*Pārask.* II, 5, 2—4, *Āp* I, 1, 3, 28—30]. The student had to go out for begging twice a day, in the morning and evening [*Āp.* I, 1, 3, 25; *Āśv.* I, 22, 4] According to *Āpastamba*, [*Ibid*] the student may beg every body's except low-caste people unfit for association with Āryas and Abhiśastas' Gautama also forbids [II, 35] the student begging of 'Abhiśastas and outcastes' while Viṣṇu [XXVIII, 9] restricts the begging to 'the houses of virtuous persons, excepting those of the Guru or his relatives' Where, however, no alms could be obtained by aforesaid means the student might beg in his own house, or in that of his teacher or his relations [*Gaut* II, 37].

According to Manu, the proper persons to be approached for alms are those who are not deficient in the knowledge of the Veda and in performing sacrifices and are noted for adhering to their lawful occupations [II, 183—185, *Baudh.* 1, 2, 3, 13.] The student shall not beg for his own sake alone [*Āp.* I, 1, 3, 35] but submit the proceeds of his begging to his teacher. [*Ibid.*, 31; *Āśv.* I, 22, 10, *Vasiṣṭha* VII, 14; *Viṣṇu*, XXVIII, 10.] If the proceeds are other than food, such as cattle, or fuel, they are to be offered to the teacher as rewards given to priests for the performance of a sacrifice [*Āp.* I, 1, 4, 3] Baudhāyana [I, 2, 4, 7] points out the virtues of begging, *viz.*, that by this the student makes himself poor and humble in spirit. It was thus valued as a method of moral discipline.

The life of the student was regulated on the principle that he must do what is pleasing and serviceable to his teacher [*Gaut.* II, 50; Viṣṇu XXVIII, 7] As Āpastamba puts it more definitely, the pupil shall 'assist his teacher daily by acts tending to the acquisition of spiritual and material wealth' [I, 1, 4, 24]. The former class of acts will comprise collecting sacred fuel, Kuśa grass, cowdung, earth, and flowers for sacrifice, as also fetching a pot full of water, while the latter class implies gathering fuel for cooking, begging alms, etc. [Manu II, 182.]

Thus the next important class of duties after begging is that connected with fuel and fire. The pupil is to fetch firewood out of the forest without damaging the trees [*Pārask.* II, 5, 9] and before sunset [*Āp.* I, 1, 4, 15]. The fuel thus fetched daily from the forest is to be placed on the floor of the teacher's house After having kindled the fire and swept the ground around the altar, the pupil is to place the sacred fuel on the fire every morning and evening. He shall sweep the place around the fire after it has been made to burn (by the addition of fuel) with his hand and not with the broom (of Kuśa grass) but

before adding the fuel he is free to use the broom at his pleasure [*Ibid.* 16—19]

Besides fetching fuel and tending the fire twice daily, the pupil was to fetch water in a vessel for the use of his teacher both in the morning and evening [*Ib.* 13]

Thus the standing duties to be performed by the student in the interests of his teacher and of his own discipline and moral life were begging, fetching fuel, water and flowers and other articles for sacrifice and tending the sacred fire. The duties were more of the nature of services rendered to the teacher but there were others more directly connected with his own life We have already considered the regulations prescribed regarding the student's diet. We shall now consider those regarding his dress, the luxuries he must avoid, his general behaviour, the habits he must avoid or cultivate and the like.

The dress of the Brahmacārin was practically the same as is prescribed for him on the occasion of his Upanayana ceremony. The dress was made up of (1) the girdle, (2) the staff, (3) lower garment, (4) upper garment, and (5) sacrificial string The girdle of a Brāhmaṇa was to be made of Mūñja grass, smooth and soft, arranged in three strings to be twisted to the right. A bowstring made of Mūrvā fibres (Manu) should be the girdle of a Kṣatriya or a string of Mūñja grass in which pieces of iron have been tied. The girdle of a Vaiśya should be of woollen or hempen (Manu) threads or a rope used for yoking the oxen to the plough or a string made of Tuṅgla bark If Mūñja grass (and so forth) be not procurable, the girdles might be made of Kuśa, Aśmantaka and Balbaja fibres with a single threefold knot or with three or five knots according to the custom of the family. The staff worn by a Brāhmaṇa should be made of Palāśa or Bilva wood (Manu), that of a Kṣatriya of a branch of

the banyan tree which grows downwards or of Vata or Khadira (Manu), that of a Vaiśya of Bilva or Udumbara wood or of Pīlu (Manu). According to some authorities the staff of a student, without any reference to caste, should be made of the wood of a tree that is fit to be used at the sacrifice. The length of the staff also varies according to caste: for a Brāhmaṇa it is to reach the end of his hair, for a Kṣatriya to reach his forehead and for a Vaiśya the tip of his nose (Manu). The staves should be straight, without a blemish, handsome to look at, not likely to terrify men, with their bark perfect, unhurt by fire [Manu II, 47]. The lower garment for a Brāhmaṇa was to be made of hemp, for a Kṣatriya of flax and for a Vaiśya of the skin of a clean animal or wool (Manu). According to Gautama, hempen or linen cloth, the inner bark of trees and woollen blankets may be worn as lower garments by students of all castes, or undyed cotton cloth. Skins are to be worn as upper garments, for the Brāhmaṇa the skin of a common deer or black doe or antelope and if it is a black skin it is not to be spread on the ground for purposes of sitting or lying upon it, the skin to be worn by a Kṣatriya was to be that of a spotted deer or a tiger [Viṣṇu] while the Vaiśya was to wear the skin of a he-goat. According to Āpastamba, the skin of a sheep is fit to be worn by all castes and a blanket made of wool. He further cites a *Brāhmaṇa* [cf. *Gopatha Brāhmaṇa* cited above I, 2, 4] which states that he who wishes the increase of Brāhmaṇa power should wear cloth only, while he who wishes both should wear both (skin and cloth). The upper garment is also to be coloured differently for the different castes. The garment of a Brāhmaṇa is to be dyed with a red dye produced from a tree or red Lodh (*Ap.*); that of a Kṣatriya is to be dyed with madder and of a Vaiśya with turmeric. The *sacrificial string* of a Brāhmaṇa is to be made of cotton twisted to the right and consisting of three

threads; that of a Kshatriya of hempen threads and that of a Vaisya of woollen threads. According to Baudhāyana [I, 8 5] the sacrificial thread is to be made of Kuśa grass or cotton and should consist of thrice three strings hanging down to the navel. Lastly, there are rules for the arrangement of the hair, which were determined not by the individual choice of the student but by the custom of his family, school, or country. The following ways of arranging the hair are mentioned, *viz.*, shaving the head, wearing the hair tied in a braid or keeping merely a lock on the crown of the head tied in a braid (shaving the other portions of the head).[1]

According to Āpastamba [I, 2, 5, 9-10] the duties of a student consist in acts pleasing to the spiritual teacher, the observance of rules conducive to his own welfare and industry in studying. 'Acts other than these need not be performed by a student' (such as pilgrimages and the like according to the commentator, thus showing the puritanic austerity of the discipline which would not allow even these innocent diversions because they are for the householders and aged people). We have already considered the first class of these duties, *viz.*, the services to be rendered to the teacher. Now we shall consider the second class of duties connected with the student's own welfare from which we can gather his daily routine.

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[1] For girdle see *Gā.* I 15, *Bo.* I, 3, 13; *Āp.* I, 2, 33—37, *Vā.* XI, 58—60, *Vi.* XXVII, 10; *Pā.* I, 29; *Ā. Gr.* I, 19, 10—11, *Śā. Gr.* II, 1, 15—17, *Pā. Gr.* II, 5, 21—23, *Gā. Gr.* II 10, 10; for staff see *Gā.* I, 22—26, *Bo.* I, 3, 15 *Āp.* I, 2, 38; *Vā.* XI, 52—57: *Vi.* XXVII, 21—24, *Pā.* I, 29, *Ā. Gr.* I, 19, 12—15, *Śā. Gr.* II, 1, 18—24, *Pā. Gr.* II, 5, 25—28, *Gā. Gr.* II, 10, 11, for upper and lower garments and for sacrificial string see the chapters above indicated. For hair see *Gā.* I, 27 II 10, *Āp.* I, 2, 31-32, 30, 8, *Vā.* VII, 19, *Vi.* XXVIII, 41

The student is to rise from his bed before his teacher[1] and before sunrise[2] in the last watch of the night.[3] Penances are prescribed for the sin of sleeping when the sun rises or sets or when the teacher is awake.

Then he is to bathe and purify himself.[4] He is not to spit in the water whilst bathing but must swim motionless[5] or plunge into the water like a stick.[6] He must not wash his body with hot water for pleasure, but if it is soiled by unclean things, he might clean it with earth or water in a place where he is not seen by his Guru.[7] He is not to use any bathing powder or the like for cleaning himself. The bath has to be taken three times a day.[8]

His next duty is to perform his morning devotions (*sandhyā* or muttering the Sāvitri). This must be done with a concentrated mind in a pure place outside the village, and in a standing posture and in silence. The prayer is to begin from the time when the stars are still visible and to end when the sun rises. The evening prayer is also to be similarly performed from the time when the sun still stands above the horizon until the stars appear.[9]

Returning home after his twilight devotions the student is to offer oblations of water to the gods, sages

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[1] *Vi.* XXVIII, 13, *Ba.* I, 3, 21

[2] *Āp* II, 12, 13-14; *Ga.* XXIII, 21; *Vas* XX, 4, *Ba.* II, 7, 16; *Vi.* XXVIII, 53, *Manu* II, 220.

[3] *Āp* I, 5, 12.

[4] *Manu* II, 176; *Ga.* II, 9-9.

[5] *Āp* I, 2, 30, *Ba.* I, 3, 39-40.

[6] *Vi.* XXVIII, 5

[7] *Āp.* I, 2, 28-29

[8] *Vi.* VII, 17, *Ga.* II 8

[9] *Manu* II, 101, 222; *Ga.* II, 10-11, *Vi.* VII, 16, *Āp* I, 30, 6, *Ba.* II, 7, 13-14

and manes, worship the images of the gods and place fuel on the sacred fire.[1]

He must avoid the following luxuries: perfumes, garlands, anointing his body, applying collyrium to his eyes, use of shoes, umbrella, parasol, and carriage, and sleep in the day-time.

There are laid down many moral injunctions which the student must obey. He must avoid singing, playing musical instruments, and dancing at which he must not even look. [*Ap* I, 3, 11] He must not go to assemblies (for gambling etc.) nor to crowds assembled at festivals.

Certain virtues or moral qualities are specified for his cultivation and practice. He must avoid idle disputes or gossiping, backbiting and lying. He must be free from sensual desire, anger, envy, covetousness. He must not injure animate beings. He must talk with women only so much as his purpose requires. He must be forgiving, untired in fulfilling his duties, modest, possessed of self-command and devoid of pride.

There are rules regulating the behaviour of the student towards his teacher. He must always obey his teacher except when ordered to commit crimes which cause loss of caste. He must not contradict him. He must occupy a couch or seat lower than that of his teacher. When he meets his teacher after sunrise (coming for his lessons), he shall embrace his feet and shall study after having been called by the teacher to begin the lesson. He must not stretch out his feet towards him, but, according to some, he may if the teacher be lying on a bed. He shall not address the teacher whilst the latter is in a reclining position, but he may answer the teacher sitting if the teacher himself is sitting or lying down.

[1] *Manu* II, 176.

And if the teacher stands, he shall answer him after having risen also He shall walk after him if he walks and run after him if he runs. He shall not approach his teacher with shoes on his feet, or his head covered or holding implements in his hand except when on a journey or occupied in work. He shall approach his teacher with the same reverence as a deity, without telling idle stories, attentive and listening eagerly to his words. He shall not sit either too near to or too far from his teacher nor with his legs crossed In the presence of his Guru he is to avoid covering his throat, leaning against a wall, stretching out his feet, spitting, laughing, yawning and cracking the joints of his fingers. He must not sit with his teacher to leeward or to the windward of him but may sit with his teacher in a carriage drawn by oxen, horses, or camels, on a terrace on a bed of grass or leaves, or a mat, on a rock, on a wooden bench or in a boat

From the regulations governing the life of the student in the house of his preceptor, we now pass on to the regulations governing his studies.

The student must commence his study in the morning, embracing the feet of his teacher both at the beginning and end of his lesson. After having received permission he will sit down to the right of his teacher, turning his face towards the east or towards the north. Then the Sāvitrī is to be recited together with the syllable *Om* before the instruction in the Veda is begun The student must be very attentive the whole day long, never allowing his mind to wander from the lesson during the time devoted to study During the time for rest (which he has after attending to his studies and the business of his teacher which has been indicated above) the pupil is to give his mind to doubtful passages of the lesson learnt.

The courses of study included the 'whole Veda' together with the '*Brāhmaṇas*' as stated by Manu [II, 165]

There were also accompanying various kinds of austerities and vows prescribed by the rules of Vedic study. By the whole Veda the commentators understand the four Vedas with the Aṅgas or one entire Śākhā consisting of the Mantras and the Brāhmaṇas. By the term *Rahasyas* are meant the Upaniṣads or the secret explanation of the Veda. According to Viṣṇu [XXVIII, 34-35] the student must first acquire by heart one Veda or two Vedas or all the Vedas and thereupon the Vedāṅgas. If without studying the Veda he applies himself to another study he degrades himself and his progeny to the state of a Śūdra. In another place, he discusses the comparative merits of the different subjects of study which include the hymns of the Ṛigveda, the Yajus texts, the Sāman melodies, the Atharvaveda, as well as the Purāṇas, Itihāsas, Vedāṅgas and the Institutes of Sacred Law [XXX, 34—38.] In yet another passage [*Ib.*, 43] the knowledge imparted to the pupil is stated to be of three kinds, viz., worldly knowledge (relating to poetry, rhetoric, and the like subjects), sacred knowledge (relating to the Vedas and Vedāṅgas) and knowledge of the Supreme Spirit.

It has been already indicated that there were prescribed some special *vratas* or observances which the student had to keep through certain periods of time before the different texts appointed in the course of Brāhmaṇical studies could be taught to him. We have already referred to the first of these—the *Sāvitra vrata* by the observance of which the student is introduced to the Sāvitrī verse. Then follows the *Śukriya vrata* (duties of holiness) to be kept for three days, or twelve days, or one year, or any other period of time according to the teacher's discretion [*Śā. Gṛ. Sū.* II, 11, 10]. By this *vrata* the student is enabled to study the sāman portion of the Veda. Next follows the *Anupanaya* or the way of studying the Veda which can be done only after the Śukriya vrata has been enjoined on the student. Be-

fore that nothing but the Sāvitrī can be taught to him [*Id.* p. 69, note S. B. E. ed.]. Finally come the *Sākvara*, *Vrātika* and *Anupanāda* observances each of which used to last one year and refer to the different parts of the Āranyaka. These three are special *vratas* connected with the character of mystical secrecy attributed to the Āranyaka. After the lapse of the year through which the *vrata* is kept, a ceremony is performed called *Uddīkshaṇa*, i. e., the giving up of the Dīkshā or preparatory observance for the study of the Āranyaka texts. This Uddīkshaṇa consists chiefly in the teacher's ascertaining whether the student has fulfilled the duties involved by the *vrata*. Besides that, a repetition of the Upanayana also formed part of the preparatory rites for the study of the Āranyaka.[1] After this the teacher goes out of the village in a north-eastern direction and sits down on a clean spot, turning his face to the east. Then when the sun has arisen he recites in the way prescribed for the Veda-study (*i.e.*, the *anuvākas*) the Āranyaka texts to the student as the '*Rahasya* as termed by Manu. These vratas which the student has to undergo in the time of his studentship are those of the Ṛgveda. There are some different vratas for the followers of the Sāmaveda, which are thus explained by the commentator on *Gobhila Gṛihya Sūtra* III, 1, 28: "The *Upanayana vrata* has been declared to refer to the study of the Sāvitrī; the *Gaidha* vrata to the study of the collections of verses sacred to the gods Agni, Indra and Soma Pavamāna (this is the Pūrvārcika of the Sāmaveda), the *Vrātika vrata* to the study of the Śukriya sections, the *Āgneya* vrata to the study of the *Aranyaka* without Śukriya sections, the *Anupanāda* vrata to the study of the *Upanishad-Brāhmaṇa*; the *Jyeshṭha-sāmika vrata* to the study the Ajya-dohas." (S. B. E. XXX, p. 69 n.)

[1] According to Āpastamba, a fresh initiation is necessary for the study of the Atharva Veda but not of other Vedas. (See *Pariśiṣṭa-Sūtra* I, 1, 5.)

It is thus clear that the graduated course of studies corresponded to a graduated course of special observances or practical discipline whereby the gradual development of the inner capacities answering to the growing difficulty of the subjects of study was sought to be secured

All the Sūtras are agreed as to the length of the period of studentship It is to consist ordinarily of twelve years for the mastery of each Veda. 'Twelve years lasts the Brahmacharya for each Veda or until he has learnt it.' [*Āpast.*] 'The studentship lasts fortyeight years, or twentyfour years or twelve years or until he has learnt the Veda.' [*Hiraṇya.*] 'He who has been initiated shall dwell as a religious student in the house of his teacher for fortyeight years (if he learns all the four Vedas) or a quarter less (*i e*, for thirtysix years) or threequarters less (*i e*, for twelve years) but twelve years should be the shortest time for his residence with his teacher.' [*Āp.*] Manu however, recognises only the three Vedas for study and prescribes thirtysix years or half that time or quarter or the period required by the student to learn them perfectly. [III 1] Baudhāyana, prescribing the same time limits, calculates that at least one year will be required for the study of each Kāṇḍa (of the seven Kāṇḍas of the *Taittirīya Saṁhitā*) [I, 2, 3, 3]. The rather excessive length of the period of studentship under the scheme of the Sūtras is also noticed by Baudhāyana who says that life is uncertain (Cf. 'Life is short while art long') and quotes a passage from the Śruti which declares 'Let him kindle the sacred fires while his hair is still black' This means that the period of studentship must not be protracted too long.

In connection with the length of the period of studentship we have to consider the length of what may be called the academic term, *i e*, the number of days of actual teaching done in these Brāhmaṇical schools in the year The school term opens solemnly with the performance of

a special ceremony called the *Upākarma* on the full moon of the month of Śrāvaṇa (July-August). From this opening day for a month study in the evening is not permitted (though according to Haradatta, the commentator, it is not sinful to study later in the night after evening). The term then continues until the full moon of the month of Pausa or the Rohiṇī day when it is solemnly closed by the performance of the *Utsarjana* ceremony after which the student has to leave off reading the Veda. Thus the term comprises five months in the year, *viz.*, latter half of Śrāvaṇa, Bhādrapada, Āśvina, Kārtika, Mārga-Śīrṣa and the first half of Pausa. [See *Āpas* I, 3, 9.] Manu [IV, 95-96] makes the academic term comprise four months and a half by prescribing for the *Upākarma* ceremony the alternative date of the full moon of Bhādrapada and for the *Utsarjana* the *Pausa* (or moth) day of Pausa or the first day of the bright half of Māgha. Thus the interruption of Vedic teaching lasts for six months and a half or five months and a half. [Śāṅkh. IV, 6, 7-8.] During this period though the teaching was not done the private study of students was however not to be interrupted. Manu [IV, 98] lays down the rule that after the performance of the *Utsarjana* ceremony the student is to study the Veda during the light nights of each month until the full moon of Śrāvaṇa in order to fix in his mind the part learned already; and in the dark fortnight of each month he is to study all the Vedāṅgas, grammar and the rest. [Haradatta's commentary quoted in S. B. E. II, 33.] With the commencement of the next academic term the student will begin the study of a fresh part of the Veda.

The academic term is punctuated by numerous holidays. The interruptions of study were allowed for a variety of causes and circumstances. The first cause of such interruptions is the occurrence of certain natural phenomena. These include the following: wind whirling

up dust in the day time (dust storm) or audible at night; sky flaming red; rainbow, hoarfrost settling on the ground; clouds out of season; thunder, rain (sufficiently heavy to cause dripping of water from the edge of roof) and lightning out of season or in season (in which case the study is to stop for the remaining hours of the day or night), Jupiter, Venus, the sun and the moon surrounded by a halo; thunder, earthquake, eclipse and fall of meteors (to stop study until the same time next day, *i.e.*, for 24 hours); simultaneous rain, thunder and lightning (to stop study for three days). *Secondly*, the standing list of holidays included the following—new moon (two days' leave); full moon days of the months of Kārtika, Phālguna and Āsādha, eighth and fourteenth days of each half month and full moon day of every month (Manu, IV, 113), certain other days set apart for religious ceremonies, *e.g.*, three Astakas (involving three days' leave for each), spring festival (which, according to Haradatta, falls on the thirteenth of the first half of Caitra) and the festival of Indra in the month of Āṣāḍha (when the study of an '*anuvāka*' is forbidden, according to Āpastamba, and lastly, festive days (the day of the initiation and the like) [*Gaut.* XVI, 43]; *Thirdly*, study is forbidden in the case of certain political or other events taking place, *e.g.*, invasion of the village [*Gaut.* XVI, 34, Manu IV, 118], when the cows are prevented from leaving the village due to cattle-lifting by robbers and the like [*Āp.* 1, 3, 9, 25]; or during a battle [*Vi.* XX, 61]; if outcasts ['robbers such as Ugras and Nṛśdas' (Haradatta on *Āp.* 1, 3, 9, 18)] have entered the village or if *good men have come*, or when a king or a learned Brāhmaṇa (who has mastered one Veda) or a cow or a Brāhmaṇa in general has met with an accident; or when the king of the country has died [*Gaut.* XVI, 32] or has become impure through a birth or death in his family (cf. modern 'court mourning') [Manu IV, 110]. *Fourthly*, study is to be

stopped when certain sounds are heard, *e.g.*, howling of jackals barking of dogs, braying of donkeys, grunting of camels, cry of a wolf, screeching of an owl; the sound of an arrow, of a large or small drum; the noise of a chariot; the wail of a person in pain or weeping

There are specified certain circumstances under which study is not permitted. One must not study in the following places a burial ground, extremity of a village, a high-road, a village in which a corpse lies or Chaṇḍālas live, or a forest, if a corpse or a Chaṇḍāla is in sight. Nor must one study during impurity when his near relations have died, or when he has partaken of a funeral repast or of dinner on the occasion of a sacrifice offered to men (when the study is stopped for a day and a night) Considerations of health dictate stoppage of study under certain circumstances, *e.g.*, when the pupil has vomited or emits a foul smell or suffers from sore eruptions or when he has taken his evening meal.

Lastly, there is an interesting regulation of a different kind for the stoppage of study "If some of his fellow-students are away on a journey, he shall not study during that day the passage which they learn together" [*Āp.* I, 3, 11, 11]. 'If one pupil has gone on a journey and another stays with the teacher, the study of the Veda shall be interrupted until the absentee returns.' [*Gaut* XVI, 33] In connection with some of these rules for the interruption of study, it should be noted that they seem to apply to the study of new parts of the Veda and not of the parts already learnt, nor to the study of the Aṅgas of the Veda. This is clear from Manu [II, 105-106]: "Both when one studies the supplementary treatises of the Veda and when one *recites* the daily portion of the Veda, no regard need be paid to forbidden days, likewise when one repeats the sacred texts required for a burnt oblation. There are no forbidden days for the daily recitation

since that is declared to be a *Brahma-sattra* (an everlasting sacrifice offered to Brāhmaṇas); at that the Veda takes the place of the burnt oblations, and it is meritorious even when natural phenomena requiring a cessation of the Veda study take the place of the exclamation *Vaṣaṭ*." The same view is held by Āpastamba [I, 4, 12, 9] according to whom these various cases for the prohibition of study refer only to the repetition of the sacred texts in order to learn them and not to their application at the sacrifices. He quotes *Vājasaneyi-Brāhmaṇa* which declares that Vedic recitation is a sacrifice and must be done when it thunders, or a thunderbolt falls, or lightning flashes, for these sounds are like *Vaṣaṭ* (which, when pronounced by the Hotṛi priest, serves as signal for the Adhvaryu to throw the oblations into the fire) which must not be heard in vain.

We shall now consider the methods of teaching, the rules of Vedic study implied by what is technically termed *Anuvacana*. These rules are best explained in the Śāṅkhāyana Gṛihya Sūtra [II, 7, 18-27]. In the first place the text of a hymn of the Ṛigveda is taught to the student. Secondly, the Ṛṣi, deity, and metre of the hymn are indicated to him. In this way the teacher is to go on reciting the hymns belonging to each Ṛṣi or each Anuvāka which make up the lesson for each day. There seem to have been, however, shorter lessons for the students of other castes who had no intention of becoming Vedic scholars. For these students a day's lesson might comprise an Anuvāka of the Kṣudra Sūktas or short hymns of the Ṛigveda (i.e., the tenth maṇḍala), or as much as the master may think fit for them, or it was still further whittled down to the first and last hymn of a Ṛṣi or Anuvāka the study of which would, by a sort of fiction, be regarded as the study of the whole portion belonging to that Ṛṣi or the entire Anuvāka, or lastly, it might be

even only one verse of the beginning of each hymn (of the collection belonging to a Ṛṣi as making up an Anuvāka)

Hiraṇyakeśin [I, 2, 9, 16] lays down that at the beginning and on the completion of the study of a Kāṇḍa (i.e., of the Black Yajurveda which is divided into books called Kāṇḍas) there is to be performed a special ceremony or a sacrifice for which a verse is prescribed in which there is a prayer for the gift of insight. Āpastamba [I, 3, 11, 6-7] also refers to the ceremony for beginning a Kāṇḍa and also to the ceremonies prescribed on beginning or ending the recitation of one entire Veda He further lays down the rule that when the student studies the index of the Anuvākas of a Kāṇḍa (i.e., completes the study of the Kāṇḍa) he shall not study that Kāṇḍa on that day nor in that night. In another place [I, 4, 13, 10] he enjoins that without a vow of obedience a pupil shall not study nor a teacher teach a difficult new book with the exception of the texts called Tṛṇkāvana and Tṛṇkahavacana, but he quotes the contrary opinion of Hārita who does not allow that exemption but insists on a vow of obedience for the study of the whole Veda This shows also that the Aṅgas or works explanatory of the Veda need not be studied under a vow of obedience.

A few more rules of Vedic study are laid down by Āpastamba [*Ib.*] Out of term the student must not study any part of the Veda which he has not learnt before. Nor shall he study during term some new part of the Veda in the morning That which has been studied before must never be studied during the vacation or in the evening According to Viṣṇu [XXX, 27] a student must not lie down to sleep again when he has begun to study in the second half of the night. This is of course study by himself and not with his teacher

According to Gautama [XVI,21] and also Viṣṇu [XXX 26] the Ṛgveda and Yajurveda must not be studied while the sound of the Sāmans is heard, while, according to Āpastamba [I, 3, 10, 20], if another branch of the Veda is being recited in the neighbourhood, the Sāman melodies must not be studied.

Details of the methods of oral instruction pursued by these ancient teachers are furnished by a Prātiśākhya of the Ṛigveda and have been rendered easily accessible by MaxMüller in his *History of Ancient Sanskrit Literature*. These details give us a glimpse into the lecture rooms of these Brāhmaṇic colleges. "The Guru who has himself formerly been a student should make his pupils read. He himself takes his seat either to the east or to the north or to the north-east. If he has no more than one or two pupils, they sit at his right hand. If he has more, they place themselves according as there is room. They then embrace the feet of their master and say: 'Sir, read.' The master gravely says 'Om' (*i.e.*, 'yes'). He then begins to say a Praśna (question) which consists of three verses. In order that no word may escape the attention of his pupils he pronounces all with the high accent and repeats certain words twice, or he says 'So' (*sa*) after these words."

The chief difficulties in the pronunciation of the Veda are the changes of the final and initial letters. The pupils are instructed in these euphonic rules independently (the Śikṣā), but whenever a difficult case of '*Sandhi*' occurs the Guru examines his audience and explains the difficulties. And here the method followed is this. After the Guru has pronounced a group of words, consisting of three or sometimes (in long compounds) of more words, the first pupil repeats the first word, and when anything is to be explained, the teacher stops him and says 'Sir.' After it has been explained by the pupil who

is at the head of the class, the permission to continue is given with the words 'Well, sir.' After the words of the teacher have thus been repeated by one, the next pupil has to apply to him with the word 'Sir' When there is no difficulty, the rule seems to be that the Guru says two words at a time, which are then repeated by the pupil. If it is a compound, one word only is to be pronounced by the Guru and to be repeated by the pupil. After a section of three verses has thus been gone through, all the pupils have to rehearse it again and again When they have mastered it, they have to recite the whole without any break, with an even voice observing all the rules of Sandhi marking slightly the division in the middle of compounds, and pronouncing every syllable with the high accent. It does not seem as if several pupils were allowed to recite together, for it is stated distinctly that the Guru first tells the verses to his pupil on the right, and that every pupil, after his task is finished, turns to the right and walks round the tutor This must occupy a long time everyday, considering that a lecture consists of sixty and more Prasnas or of about 180 verses. The pupils are not dismissed till the lecture is finished. At the end of the lecture, the tutor after the last half verse is finished, says 'Sir' The pupil replies, 'Yes, sir' He then repeats the proper verses and formulas which have to be repeated at the end of every reading, embraces the feet of his tutor and is allowed to withdraw.

We have now completed the consideration of the various regulations governing the life and studies of the Brahmacārin during the period of his stay at his teacher's house. But some students would elect to make the period of that stay lifelong without any desire for the householder's life or the married state Such students are known as Naisthika Brahmacārins It is probably for these that such long periods of studentship as 24 or 36

or 48 years are meant Those who would be householders would have to confine their studentship to a period of twelve years, and naturally to satisfy themselves with the mastery of a portion of the prescribed studies There is a most interesting saying quoted by Āpastamba [I, 4, 13, 19—22] but disapproved by him in which the famous scholar Śvetaketu of Upaniṣadic fame is made to declare He who desires to study more after having settled as a householder shall dwell two months every year with collected mind in the house of his teacher For by this means I studied a larger part of the Veda than before (*i.e.* during my studentship)' In another place, Āpastamba [I, 2, 5, 6] refers to the same Śvetaketu as a rare example amongst the men of later ages (when rules of studentship are always transgressed) of a scholar who became a Ṛṣi by his knowledge of the Veda, but, be it noted that as shown in the previous passage, he acquired that knowledge as a householder by observing the vow of studentship for some months in the year This is in keeping with the earliest system of the Brāhmaṇa period, when there were agencies and arrangements for the continuance of studies beyond the normal period of formal studentship

The Sūtras also continue the tradition of the Upaniṣads in another respect. They point to a plurality of teachers for the student. Young Brāhmaṇas in olden times, just as now, went from one teacher to another, learning from each what he knew. Each such teacher would generally know and teach only one Veda and a student would have to learn the several Vedas from several teachers The rules which seemingly require a pupil to stay with one and the same teacher refer only to the principle that the pupil must stay with his teacher, until he has learnt the subject which he began with him. This is evident from the following passage of Āpastamba

[I, 2, 7, 14]: 'If a pupil has more than one teacher, the alms (collected by him) are at the disposal of him to whom he is just then bound.' Another passage [I, 2, 8, 26] expressly refers to a pupil "attending to two teachers," while according to another [I, 2, 7, 26] the student is permitted, in the event of the incompetence of his teacher, "to go to another and study there" Sometimes the regular teacher may appoint another to do his work. So long as his instruction lasts the new teacher is to be treated with the same respect as the principal but according to some, only if he is a worthy person in point of learning and character. In any case obedience as towards the teacher is not required to be shown towards his substitute We are also told of teachers younger than their pupils who are not of course to show him the obedience proper for the regular teacher. One such teacher was "young Kavi, the son of Angiras who taught his relatives who were old enough to be fathers and as he excelled them in sacred knowledge, he called them 'Little sons,' for a man destitute of sacred knowledge is indeed a child' [Manu II, 151—153.] Lastly, there are mentioned persons teaching each other mutually different reductions of the Veda, in which case obedience towards each other is not ordained for them [Āp. I, 4, 13, 13—17]

But teachers could be changed not merely on intellectual grounds The obedience of the pupil was limited by the conduct of the teacher. We have already adverted to the rule that a pupil is not to obey his teacher if he asks him to commit such crimes as cause loss of caste. But we have again the further regulation that where a teacher transgresses his duties through carelessness or knowingly, the pupil will first point it out to him privately. But if in spite of this he does not amend his conduct, the pupil shall either himself perform the religious acts omitted by his teacher

or he may forsake him and return home [Āp I, 1, 4, 25—27].

This leads us to the consideration of the qualifications and duties of the teacher. According to Āpastamba [I, 1, 1, 13—17] he should be a man in whose family sacred learning is hereditary, who himself possesses it, and who is devout in following the law. Under him the sacred science must be studied until the end, provided the teacher does not fall off from the ordinances of the law. He from whom the pupil gathers (āsnoti) the knowledge of his religious duties (dharmān) is called the Ācārya whom he should never offend, as he is his spiritual father who, by imparting to him the sacred learning, gives him a new life—a second birth which is the best.

There seem to have been different classes or grades of teachers. The Ācārya is defined by Manu [II, 140 f] to be one who initiates a pupil and teaches him the Veda together with the *Kalpa* (the Sūtras referring to sacrifices) and the *Rahasya* [lit. the secret portions, i.e., the Upaniṣads and their explanation (Medh., Gov., Kull., Ragh.) or the extremely secret explanations of the Vedas and Angas, not the Upaniṣads because they are included in the term Veda (Nār.)]. According to Gautama [I, 9-10] the title Ācārya belongs to one who initiates a pupil and teaches him the Veda. According to Viṣṇu the Ācārya is he who having initiated a pupil instructs him in the *vrata*, teaches him one branch of the Veda together with its Angas. Vasiṣṭha, however, lays stress [III, 24] on the teaching of the *whole* Veda for the Ācārya. One who teaches only a portion of the Veda or who teaches the Aṅgas of the Veda is to be called *Upādhyāya* (sub-teacher) according to him. Manu [II, 141] and Viṣṇu [XXIX, 2], however, regard the Upādhyāya as the person who teaches the aforesaid subjects 'for a fee' or 'for his livelihood'. The Ācārya is ten times more venerable

than the Upādhyāya [Manu II, 145]; he is chief among all gurus [*Gaut.* II, 50], he is called an *Ātmaru* along with father and mother [*Vi.*, XXXI, 1-2].

There are prescribed regulations governing the teacher's relations with, and duties towards his pupil. The teacher is to adopt and love the pupil as his own son, and teach him the sacred science with whole-hearted attention without withholding from him any part of the whole law. A teacher who neglects the instruction of his pupil ceases to be his teacher [*Āp.* I, 2, 8, 27]. Although it is the duty of the pupil to render services to the teacher to please him, the teacher must be careful to see that the pupil is not exploited for his own purposes to the detriment of his studies. Such services are meant for the pupil's own moral improvement and not solely for the economic advantages of the teacher. In times of distress, however, the teacher was permitted to accept the assistance of his pupil [*Āp. Dhd.*, 24-25].

These old-world teachers were against hard punishments being inflicted on their young pupils. According to Gautama: "As a rule the pupil should not be punished corporally. If no other course is possible, he may be corrected with a thin rope or cane. If the teacher strikes him with any other instrument, he is liable to punishment by the king (i.e., under the law)" [II, 42—44]. Manu [VIII, 299-300] allows a pupil who has committed faults to be beaten with a rope or split bamboos but only on the back parts of the body, never on a noble part. The teacher who strikes him otherwise will incur the same guilt as a thief. Gautama, as we have seen, permits bodily punishment only as the last resource, when other means of reformation fail. These other means are defined by Apastamba to consist first of reproof by the teacher and then of "frightening, fasting, bathing in cold water and banishment from the teacher's presence," which are to be applied

according to the magnitude of the pupil's fault until the pupil is completely corrected and leaves off sinning [I, 2, 8, 28-29.]

We have already seen that the teacher proper who was called the Ācārya did not accept any remuneration for his work. He did the work of teaching as a matter of religious duty. The admission of a pupil was not a source of income to the teacher but an addition of a member to his family like that caused by the birth of a son. The teacher and the pupil were not connected with each other by the 'cash nexus' but by the ties of spiritual relationship whereby both were repaying the debt they owed to the Ṛṣis by the pursuit of knowledge. The teacher who imparted instruction for a fee would be called an Upādhyāya. But though the Ācārya could not accept a fee from a pupil under instruction, he could accept the same from the pupil whose instruction was completed. In fact it was one of the obligations of the Brahmacārin to bring to a close the period of his formal pupilage by making presents to his teacher. Of course in the majority of cases it could not be expected that such presents would be at all any adequate remuneration for the amount of labour and expense involved in supporting and educating a student for a minimum period of twelve years. It was a case, in modern parlance, of free board, lodging, medical aid, clothing and tuition given to the student during a continuous and long period exceeding a decade, the cost of which could not be properly assessed and much less paid in the shape of parting presents, especially in the case of a student of the Brahmaṇa caste which was distinguished for its phenomenal poverty. It is therefore a misconception that these parting gifts of a student to his teacher after completion of his studies destroy the honorary character of the work of the teacher or that they prove the hollowness of the prevailing assumption which makes it out to be a labour of love, a virtue which

in its own reward, while it is essentially, looking beneath the appearances, a mere economic transaction.

According to Manu, 'he who knows the sacred law must not present any gift to his teacher before the *Samāvartana* (rite performed by student to end his studentship), but when, with the permission of his teacher, he is about to take the final bath, let him procure a present for the venerable man according to his ability, such as a field, a cow, a horse, a parasol, and shoes, a seat, grain, even vegetables, and thus give pleasure to his teacher.' [II, 245-246.] The word 'procure' implies that the student is ordinarily of such circumstances that he has to collect the gifts for his teacher by begging. This supposition is indeed clearly confirmed by a passage in Āpastamba [I, 2, 7, 19—21] in which he enjoins that the student "shall procure in a righteous manner the fee for the teaching of the Veda to be given to his teacher according to his power." The 'righteous manner' means that unless his teacher is in distress and in need of immediate relief, the student is not to take the fee from an Ugra ['either the offspring of a Vaiśya and a Śūdra woman, or a twice-born man who perpetrates dreadful deeds' (Haradatta quoted in *S.B.E.* II, p. 27)] or from a Śūdra, though 'some declare that it is lawful at any time to take the money for the teacher' from such persons. It will thus appear that the payment of the fee is enjoined more as a religious act formally bringing to a close the period of studentship and marking the fulfilment of a sacred vow than as any kind of material remuneration for useful services rendered.

It may also be noted in this connection that, on account of the absence of any economic relationship between the teacher and the taught, the independence of the former as regards the choice and admission of the latter was complete and absolute. A most thorough going test of mental and moral fitness was imposed on the student whose fulfilment

of same gained him admission and not any other consideration. The spirit of the system is beautifully expressed in the following passages from Manu [II, 112—115]: "*Even in times of dire distress a teacher of the Veda should rather die with his knowledge than sow it in barren soil.* Sacred Learning approached a Brāhmaṇa and said to him" 'I am thy treasure, preserve me, deliver me not to a scorner; [' nor to a wicked man, nor to one of uncontrolled passions' (Vi, XXIX, 9, *Vs.* II, 8)], so preserved I shall become strong But deliver me, as to the keeper of thy treasure, to a Brāhmaṇa whom thou shalt know to be pure, of subdued senses, chaste and attentive." The same spirit is expressed by Baudhāyana [I, 2, 4, 2] 'As fire consumes dry grass, even so the Veda asked for but not honoured destroys the enquirer' In a word, the pass-port for admission to such Brāhmanical schools was constituted by the inherent fitness of the pupil for the Vedic studies, a fitness of which the recognised tests were a desire and aptitude for learning and a spirit of obedience and discipline. Before admitting the student the teacher would satisfy himself that he had in him the vital principle of growth, an inherent responsiveness to moral stimulus and that he is not like dull, dead, inert matter incapable of any expansion.

These tests for admission and the regulations governing the life of the student after admission during the period of his education were no doubt determined by the very ideals and aims of that education. We have already seen how in the scheme of this ancient education moral training fills a scarcely less important part than mental training The development of the inner nature or character of the student was deemed as one of the essential objects of education. The value attached to this aspect of education is apparent from the following significant declaration of Manu [II, 97] in the chapter

treating of the rules of studentship: "Neither the study of the Veda nor liberality nor sacrifices nor any self-imposed restraint nor austerities even procure the attainment of rewards to a man whose heart is contaminated by sensuality." This definitely and emphatically lays down the ancient view that mere intellectual development without the development of character, learning without piety, proficiency in the sacred lore with a deficiency in the practices it implies, will defeat the very ends of studentship. Thus the part of education that deals with the *life* of the student probably fills a larger place in the ancient pedagogic scheme than the part that deals with the mere intellect. Indeed, as the elaborate regulations we have already considered show us, the intellectual part of education covered only a part of the year, the lectures of the Vedic professors continued during about half the year, the term practically beginning with the rainy season, while even from this comparatively short period we have to deduct the time taken by a fairly numerous list of holidays. But the strict and rigid rules governing the daily life of the student knew of no relaxation or interruption, the course of moral training provided for no holidays, the disciplinary regulations acted unceasingly as impersonal teachers exercising a sleepless vigilance and control over the elastic and tender natures committed to their care. Daily has the student to get up early in the morning before sunrise, failing which he has to perform a penance [fasting the next day and muttering the Sāvitrī (Manu II, 240)]. He has to say his prayers twice a day at sunrise and sunset. Every morning and evening he has to go round the village begging and whatever is given to him he has to hand over to his master. He is himself to eat nothing except what his master gives him. He has to fetch water, gather fuel for the altar, to sweep the ground round the hearth and to wait on his

master day and night. This looks like menial service interfering with the student's studies according to our modern ideas, but we must bear in mind the accompanying explanatory regulation that the teacher is never to utilise the labour of his pupil for his own selfish household purposes and Āpastamba's definite declaration that the observance of those rules is in the interest of the student's own welfare [I, 2, 5, 9] Nor must we forget to consider that along with a progressive course of studies was prescribed a progressive course of austerities and discipline in the form of various *vratas* to be observed for promotion to higher stages of learning The growth of the whole nature of the boy, and not the growth of his intellect merely, was the objective of this ancient pedagogy. The raw material is received into the workshop after due examination as to its soundness, it is then treated to different processes of manufacture; and finally sent out to the world as finished products. The making of the nation or the country was in the charge of these schools. Their aim was to produce not mere recluses or scholars but whole men, ideal householders who would perfect family, society and country.

It has been first stated that the nation was in the making in these schools. But a doubt is sometimes expressed that the nation as a whole did not benefit by such schools which were close corporations not open to all but only to a select class, the Brāhmaṇas The evidence adduced above will show the falsity of this charge. But let a higher authority speak on the point. The following remarks are made by Max Müller [*Lectures on the Origin of Religion*, p. 349] "Before the ancient language and literature of India had been made accessible to European scholarship, it was the fashion to represent the Brāhmaṇas as a set of priests jealously guarding the treasure of their sacred wisdom from the members of all the other castes

and thus maintaining their ascendency over an ignorant people. It requires but the slightest acquaintance with Sanskrit Literature to see the utter groundlessness of such a charge. One caste only, the Śūdra, were prohibited from knowing the Veda. With the other castes, the military and civil classes, a knowledge of the Veda, so far from being prohibited, was a sacred duty. All had to learn the Veda, the only privilege of the Brāhmaṇas was that they alone were allowed to teach it. It was not even the intention of the Brāhmaṇas that only the traditional forms of faith and the purely ritual observances should be communicated to the lower castes, and a kind of esoteric religion, that of the Upaniṣads, be reserved for the Brāhmaṇas. On the contrary there are many indications to show that these esoteric doctrines emanated from the second rather than from the first caste."

The view which Max Müller thinks was in vogue before the discovery of Sanskrit Literature unfortunately still persists with great vigour even in this country and it is necessary in the interests of truth to combat it. Indeed one passage of Manu [II, 165] proves conclusively that the rules of studentship applied not merely to the highest caste but practically to the entire Indo-Āryan people "An Ārya must study the whole Veda together with the Rahasyas, performing at the same time various kinds of austerities and the vows prescribed by the rules of the Vedas." It is to be noted that the Āryas were made up of the three twice-born classes and the Śūdras making up the lower castes were outside the pale of Āryan society.[1]

[1] See the account of social divisions of ancient India in my *Local Government in Ancient India*. Cf. Max Müller (*Lectures on the Origin of Religion*, p. 350 f.) "We find the old Indian society divided, first of all, into two classes, the *Āryas* or noblebom, and the *Śūdras*, the servants or slaves. Secondly, we find that the Āryas consist of Brāhmaṇas, the spiritual nobility, the Kṣatriyas or Rājanyas, the military nobility and the Vaiśyas,

Regarding the other feature or part noted by Max Müller in an ancient educational system, *viz.*, that it was a system of compulsory universal education, we may bring together a few select passages from the Sūtra works. "A twice-born man who, not having studied the Veda, applies himself to other (and worldly study) soon falls, even while living, to the condition of a Śūdra and his descendants after him" [Manu II, 168]. We have already cited other passages [*e.g.*, Manu II, 39] in which it is laid down that persons who do not initiate themselves within the periods fixed for their castes "become Vrātyas (outcasts), excluded from the Sāvitri and despised by the Āryas."

It was not, however, mere social degradation with which breaches of the sacred and compulsory duty of a man to educate himself were punished. Vasiṣṭha [III, 4] quotes a very remarkable passage from Manu in which it is laid down that "the king shall punish that village where Brāhmaṇas, unobservant of their sacred duties and *ignorant of the Veda*, subsist by begging; for it feeds robbers." Thus the state enforced this wholesome law of compulsory education framed by society by penalising a village that even acquiesced in the culpable ignorance of Brāhmaṇas by giving them alms to which they were not entitled, and such Brāhmaṇas were to be treated not merely as *Śūdras*

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the citizens. A much more important feature, however, of the ancient Vedic society than the four castes consists in the four Āśramas or stages. A Brāhmaṇa, as a rule, passes through four, a noble man through three, a citizen through two, and a Śūdra through one of these stages. [*Ārya-Vidyā Sudhākaraḥ*, p. 153] As soon as the child of an Ārya is born, nay even before his birth, his parents have to perform certain *Saṁskāras*. As many as twenty-five *Saṁskāras* are mentioned, sometimes even more. Śūdras only were not admitted to these rites; while Āryas who omitted to perform these were considered no better than Śūdras. (According to Yama, Śūdras also may receive these sacraments up to the *Upanayana* but unaccompanied by Vedic verses).'

but also as robbers, thus meriting both social and moral odium. It is thus that we can also very well realise the force and truth of the following legitimate boast of a king in the Upaniṣadas: "In my kingdom there is no thief no miser no drunkard, no man without an altar in his house, no ignorant person." [*Chānd.*, V, 11, 5].

There is one other statement of Max Müller which also requires to be qualified. He says that the teachers were recruited only and exclusively from the Brāhmaṇa caste. Exceptions were, however, allowed to this rule. Baudhāyana [I, 2, 3, 41] permits "study under a non-Brāhmaṇical teacher in times of distress." This is confirmed by Āpastamba [II, 2, 5, 25] who says that "in times of distress a Brāhmaṇa may study under a Kṣatriya or Vaiśya," and also by Gautama [VII, 8]. Such a non-Brāhmaṇical teacher was to be paid due honour by the Brāhmaṇa student throughout the long period of his studentship. He must "walk behind him and obey him." [*Ib.*] The same injunction is also given by Manu [II, 241] "He shall walk behind and serve such a teacher as long as the instruction lasts." The supply of non-Brāhmaṇa teachers in the country was of course created by the system which freely admitted them to the Brāhmaṇical schools and made education compulsory for all.

The studentship was brought to a close by what has been termed the Samāvartana (lit. the returning home of the student) ceremony to be performed by the pupil. It included a number of acts signifying the end of the austerities imposed upon the condition of studentship. The most important was the bath accompanied by the use of powder, perfumes, ground sandal-wood and the like to be presented by the friends and relations of the student, and then were also thrown into the water all the external signs of the Brahmacarya such as the upper and the lower garments, girdle, staff,

akin. After the bath he becomes a *Snātaka* wearing new garments, two ear rings and a perforated pellet of sandal-wood overlaid with gold at its aperture—the gold which brings gain, superiority in battles, and in assemblies, and he prays that he may be loved of all Brāhmaṇas, Kṣatriyas, Vaiśyas, Śudras and Kings [*Sāṅkhāyana* I 3, 9—11] Some of the Sūtras distinguish three kinds of Snātakas [*Gobhila*, III, 5, 21—23] *Pāraśk.* II, 5, 32—35] "He who performs the Samāvartana ceremony after having finished the study of the Veda but before the time of his vows has expired, is a *Vidyā-Snātaka* He who performs the Samāvartana after his vows have expired but before his study of the Veda is finished, is a *Vrata Snātaka*. He who performs the Samāvartana after having finished both is a *Vidyā-Vrata-Snātaka*". "Of these the last ranks foremost, the two others are equal to each other" Thus a Snātaka (one who has bathed) or a Samāvritta (one who has returned home) would be, according to modern ideas, one who had taken his degree At the time of parting the teacher would say the following valedictory words. "Apply thyself henceforth to other duties" [*Āp.* I, 2, 8, 30] The teacher's valedictory message is given in a more elaborate form in one of the Upaniṣads (cited above) where it reads like a University Chancellor's Convocation Address to graduates.

RADHAKUMUD MOOKERJI

EARLY POSITION OF HARSA

The seventh century A.D. in India begins with the appearance of a remarkable figure on the political stage, and although Harsa had neither the missionary zeal of Aśoka, nor the military skill of Candragupta Maurya, yet he has succeeded in arresting the attention of the historian like both those great rulers. This has, indeed, been largely due to the existence of two contemporary works, viz., Bāṇa's *Harṣacarita* and Yuan Chwang's *Records*, which are here and there supplemented by epigraphic documents and the *Life* written by Hwui li. But in spite of the ample information supplied by these original sources, I venture to say that the results of up-to-date researches on Harsa, though useful and interesting, are in some respects far from decisive.

It is my object in this paper to give as precisely as possible an answer to the following problem: What was the real political position of Harsa at the start of his career, and how did he (if Yuan Chwang is to be believed) come to occupy the Maukhari throne of Kanauj, although we know from Bāṇa's *Harṣacarita* that he was a prince of Thaneśvar only? Now, in order to arrive at a satisfactory solution of the puzzle let us take full note of the course of events in both Thaneśvar and Kanauj, as at this period owing to matrimonial connections between the Maukharis and the Vardhanas, and the danger of common enemies, the affairs of the two kingdoms had become inextricably intertwined.

After the death of Prabhākaravardhana, the king of Thaneśvar, the task of governance fell upon the shoulders of his eldest son, Rajyavardhana, who, after having defeated

the Hūṇas of the North-West, had retreated to the capital with "limbs emaciated" and wounds properly bandaged. The young prince, however, was so much overwhelmed with grief at the loss of his father that instead of accepting sovereignty and regal glory, he determined to retire from worldly concerns and seek solace in the sylvan retreats of a hermitage; and he asked his younger brother, Harṣa, to assume the reins of Government.

Just at this juncture, when strange feelings of renunciation and aversion from worldly power were passing through the minds of both the brothers, and the tears of their bereavement had hardly had time to dry, they were struck by another bolt from the blue. For suddenly a courier named Sainvādaka arrived with the tragic news that the king of Mālava had killed their brother in law, Grahavarman, and their sister, Rājyaśrī, had been thrown into a dungeon in Kānyakubja.[1] He added "There is moreover a report that the villain, deeming the army leaderless, purposes to invade and seize this country. Such are my tidings. The matter is in the king's hands."[2] Hearing of this calamity that had overtaken the house of Kanauj, and the Malwa king's reported designs against Thaneśvar, a "deadly frown broke forth" on the "broad brow" of Rājyavardhana, who addressed his younger brother thus: "This task is my royal house, this my kin, my court, my land . . . this day I go to lay the royal house of Malwa low in ruin. The repression of this beyond-measure unmannerly foe, this, and no other is my assumption of the back-dress, my austerities, my stratagem for dispelling sorrow."[3]

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[1] *Harṣacarita* (English Translation by Cowell and Thomas, 1897), p. 173.

[2] Ibid.

[3] Ibid., pp. 174-75

He gave instructions to Harsa to remain behind with all the "kings and elephants," probably with a view to guarding the rear against any fresh Hūna upheaval, and asked only Bhaṇḍi[1] to follow him "with some ten thousand horse."[2]

But Destiny had decreed trouble for the ill-starred brothers at every step, and now it was young Harsa's turn to take a plunge into the stirred waters of the political storm. After sometime Harsa learned from one of the favourite cavalry officers that Rājyavardhana, "though he had routed the Malwa army with ridiculous ease, had been allured to confidence by false civilities on the part of the king of Gauḍa, and then, weaponless, confiding and alone, dispatched in his own quarters."[3]

Who the miscreant allies of Gauḍa and Malwa were, we have no means of ascertaining from the *Harsacarita*, but we can identify them with the help of other authorities. The Madhuban inscription affirms that "the kings

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[1] Bhaṇḍi was the son of Queen Yaśovatī's brother, who is identified by Dr Hoernle—without much justification (see C. V Vaidya, H. M H. I, Vol. I, p. 40)—with the Emperor Śīlāditya of Malwa (J R. A. S. 1903, pp. 559-60) Dr. R K Mookerji remarks that "the name Bhaṇḍi itself is a Hūna rather than a Sanskrit name" (*Harsa*, p. 61). It is difficult to follow on what grounds the learned Professor makes this assertion. Dr. Hoernle made a similar suggestion (J R. A. S. 1903, p. 560) arguing that Bhaṇḍi meaning "buffoon was a strange name for a prince." But such cynical names were not uncommon in ancient India. To give some instances, we have King Gardabhilla (J B. B R. A. S IX, p 148) or Śūdraka, authenticated from inscriptions (*Ind. Ant XVI*, p. 64; *Proc. A. S. B 1872*, p. 219)

[2] H. C., p 175

[3] H. C., p. 176.

Devagupta and others, who resembled wicked horses, were all subdued with averted faces"[1] by Rājyavardhana. If we remember that young Rājyavardhana could get opportunities to fight against two enemies only, viz., the Hūṇas of the North-West (against whom he was dispatched by his father), and the king of Malwa, who had taken Grahavarmaṇ of Kanauj by surprise with the tragic consequences described above, we feel no hesitation in identifying the latter with the Devagupta of the Madhuban inscription.[2] Fanciful as the guess may be, it would seem that Bāṇa did not like to mention this suggestive and auspicious name of Rājya's adversary—Devagupta literally means "protected by the gods"—owing to his foul deed. For the same reason probably he places the following statement in the mouth of Harṣa with regard to the king of Gauḍa, 'My tongue seems soiled with a smirch of sin, as I take the miscreant's very name upon my lips'[3]

Now, the next question that arises is What country is denoted by the name Malwa in the *Harṣacarita*? Bühler thought that this Malwa was "in the Panjab much nearer to Thaneśvar".[4] But this is "obviously an error," as pointed out by Dr Hoernle.[5] It probably

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[1] *Ep Ind.* I, p. 74.

[2] (See also Bühler, Ibid., p. 70; C V Vaidya, M M H. I Vol I, p 35) According to Dr Hoernle it was the Emperor Śīlāditya of Western Malwa, son of Yaśodharmaṇ, who was defeated by Rājya (J R. A. S. 1903, p 561). It seems, however, inexplicable how, if Śīlāditya was the principal opponent, his name is omitted in the Madhuban inscription, and left to be implied by the vague term "others"

[3] H C., p. 179

[4] *Ep Ind.* Vol. I, p 70.

[5] J R. A S 1903, p 561, note

denoted Eastern Malwa corresponding to the Bhilsa district on the Vetravati, for we are told in the commentary of the Kāmasūtra of Vātsyāyana that Ujjayinī denoted Western Malwa, and where only Malwa is mentioned it should be taken to mean Eastern Malwa.[1] We know that this part of Malwa continued to acknowledge the Gupta supremacy long after the downfall of the Imperial family[2]; and it appears that after the defeat of Dāmodaragupta at the hands of Sarvavarman Maukhari,[3] the later Guptas were ousted from Magadha, and Mahāsenagupta established himself in Eastern Malwa in order to pursue his schemes of regaining the lost possessions. Devagupta seems to have been a scion of this later Gupta family, but we do not know with certitude what relationship he bore to Mahāsenagupta.

According to the testimony of Yuan Chwang, the king of Gauḍa was Śaśāṅka (She-shang-ka),[4] the wicked king of Karṇasuvarṇa in East India,[5] who persecuted

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[1] Ujjayinīdeśabhāvyastu eva paramālavyah . . . malavya iti purva Mālavabhāvī (*Ind., Ant.* 1878, p. 259, footnote 4).

[2] See, e.g., the Betul plates of Pravirāja Maharāja Sankshobha dated 199 G. E = 518 A. D. (*Ep. Ind.* VIII, pp. 284—87), Khoh inscription of the year 209 G. E. = 528 A. D. (Fleet, C. I. I. Vol. III, pp. 113—16).

[3] Aphsad Inscription, Ibid., p. 206.

[4] Beal, I, p. 211. See also the commentator on the *Harṣacarita* (Bombay Edition, 1892, p. 195). The learned translators of the *Harṣacarita* find an allusion to him in the word Śaśāṅkamaṇḍala (H. C. Preface, p. x). According to one MS of the *Harṣacarita* he is called Narendragupta (Ep. Ind. I, p. 71).

[5] Karṇasuvarṇa has been identified by Beveridge with Rangamati, near Berhampur, in Bengal (J. A. S. B. LVII, p. 315). See also N. L. Dey's *Geographical Dictionary* (1927), p. 94.

the Buddhists[1] and uprooted the sacred Bodhi Tree.[2] Probably it is with regard to the Gauda king's treachery that the Madhuban inscription says that he (Rājya) "in consequence of his adherence to his promise (satyānurodhena) gave up his life in the mansion of his foe".[3] And this inveigling of the rescuer of Kanauj into the death-trap is further explained by the commentator on the *Harsacarita*, who informs us that "Śaśāṅka threw Rājya off his guard by his offer to marry his daughter to him as a token of submission and friendship".[4]

Whatever the means that were employed to perpetrate the foul deed, it is certain that after Rājya's death the outlook for both the allied houses of the Vardhanas and the Maukharis became gloomy in the extreme. Thaneśvar was deprived of its young ruler; and Kanauj, having lost its sovereign, as well as the timely support of the former kingdom, passed under the occupation of the king of Gauḍa, who in order to divert the attention of Bhaṇḍi, or his adversary's army, released Rājyaśrī, the widowed queen of Kanauj, from detention in that city.

Bāṇa says that instantly on hearing the tragic news of his brother's assassination, Harsa's "aspect became terrific in the extreme," and "his wrathful curling lip seemed to drink the lives of all kings"[5] as he cursed the "vilest of Gaudas" with his fiery spirit.

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[1] Watters, I, p. 343.

[2] *Life*, p. 171. Śaśāṅka's animosity against Buddhism is explained by his Saivite tendencies (see Allan's *Gupta Coins*, p. 147).

[3] *Ep. Ind.* I, p. 74.

[4] Compare the original: Tathā hi tena Śaśāṅkena viśvāsārthaṁ kanyāpradānaṁ uktvā pralobhito Rājyavardhanaḥ svagehe sañcaro bhinajana eva chadmanā vyapāditaḥ.

[5] H. C., p. 173.

Thereupon the general Siṁhanāda exhorted Harṣa to punish the miscreant, and assume the burden of sovereignty, in these words "Now that the king has assumed his godhead and Rājyavardhana has lost his life by the sting of the vile Gauḍa serpent, you are, in the cataclysm which has come to pass, the only *śeṣa* left to support the earth. Comfort your unprotected people. Like the autumn sun, set your forehead-burning footsteps upon the heads of kings."[1]

Harṣa forthwith replied to the advice of the general: "My heart would force chowries upon even the sun's presumptuously bright hands. *Enraged at the title of king*, my foot itches to make footstools of even the kings of beasts." And he registered his determination to wreak vengeance with the following vow "By the dust of my honoured lord's feet I swear that unless in a limited number of days, I clear the earth of Gauḍas, and make it resound with fetters on the feet of all kings, who are excited to insolence by the elasticity of their bows, then will I hurl my sinful self, like a moth into an oiled flame."[2]

Thus, according to Bāṇa, Harṣa immediately after the murder of his elder brother ascended the paternal throne of Thaneśvar, and began to devise measures to retrieve the disaster that had overtaken the Vardhanas and the Maukhari house of Kanauj. There is absolutely no trace in the *Harṣacarita* of his displaying any hesitation in assuming the crown.

Here we must pause to consider a passage occurring in the *Harṣacarita* on the strength of which scholars try to detect some scruples or reluctance

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[1] Ibid., pp. 183-84.

[2] H. C., p. 187

on the part of Harsa[1]. It runs thus: "He was embraced by the goddess of the Royal prosperity who took him in her arms and, seizing him by all the royal marks on all his limbs, forced him, *however reluctant*, to mount the throne,—and this though he had taken a *vow of austerity* and did not swerve from his vow."[2] To me, however, it appears only a poetic way of describing that the wheel of Destiny was revolving in favour of Harsa, and although he had not the prior claim to succeed his father—on account of his being younger—circumstances so conspired that he suddenly found himself elevated to the throne. Sanskrit literature is replete with such "poetic mannerisms," and we may in this connection also recall an almost parallel expression used in the Junagadh Rock inscription for Skandagupta "Lakshmih svayam yam varayāmcakāra," meaning "Whom the goddess of Fortune, of her own accord, selected as her husband."[3]

As regards Harsa's previous reluctance and vow of austerity, the *Harsacarita* may refer to one of these circumstances:

(a) Probably it refers to his reluctance to avail himself of his father's preference for him, which Prabhākaravardhana seems to have indicated on his death-bed in these words. "Succeed to this world; appropriate my treasury, make prise of the feudatory kings, support the burden of royalty, protect the people, guard well your dependants."[4] There was nothing incongruous in passing over the

[1] Cowell and Thomas, Ibid, preface p. x., Dr. R. K. Mookerji, *Harsa* p. 20.

[2] H. C., p. 57

[3] Fleet, C. I. I. Vol III, No. 14, line 5, pp. 59, 62.

[4] H. C., p. 156

claims of the elder son, Rājyavardhana, for such selections appear to have been common in the Gupta times. Samudragupta was chosen to succeed his father to the distress of "others of equal birth," and with the consent of the state council. Similarly Samudragupta also chose his successor (tatpariguhītena). But Harsa was too noble-minded to take advantage of his brother's absence, and instead of striking while the iron was hot, he is represented to have thought that: "Let sovereign glory flee to a hermitage"[1] and "let valour mortify herself in forest seclusion, let heroism put on rags."[2]

(3) Secondly, the passage may refer to Harsa's previous vow not to accept the crown when Rājya, overwhelmed by grief, wanted to abdicate in his favour and retire to the forest. Harsa had also resolved to follow in his brother's train, if he persisted in renouncing the throne, thinking within himself: "And the sin involved in transgressing my elder's commands austerity in fine shall dispel in a hermitage."[3] But his subsequent accession to the throne without any hesitation meant no swerving from his original vow of renunciation, taken under certain conditions, as after his brother's death Harsa was the only Śeṣa left to come to the succour of both the Thāneśvar and Kanauj kingdoms.

And, besides, there was no other reason why Harsa should refuse to assume the royal duties. Watters' statement that Harsa "in the early part of his life had joined the Buddhist church and perhaps taken the vows

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[1] H. C., p. 158.

[2] Ibid., p. 159.

[3] Ibid., p. 173.

of a Bhikṣu, or at least a lay member of the communion"[1] merits no credence. Harṣa began as a Śaivite, and continued to be so till late in his life, as the Banskhera inscription of the year 22, which calls him a "Paramamāheśvara," definitely shows.[2] It was also probably due to his original Śaiva tendencies that he complimented the king of Assam through his envoy, saying "To whom save Śiva need he pay homage? This resolve of his increases my affection".[3] We have also got no warrant for Smith's assumption that Harṣa's reluctance was due to the nobles having "hesitated before offering the crown" to him.[4] We know it for certain from Bāṇa's account that the feudatories were loyal to Harṣa. When Kuntala delivers the tidings of Rājya's murder in the audience-hall the feudatories are represented as being in attendance on Harṣa. We are further told that "at the hour of marching the front of the king's tendence became full of chieftains from every side".[5] Thus, if they had been turbulent from the beginning, they would have given greater trouble to young Harṣa after Rājya's death, but instead, we find them offering their unstinted help to their royal master.

Having fully discussed Harṣa's political status in Thaneśvar after his brother's death let us now resume the thread of the narrative.

With the resources of Thaneśvar at his command as king Harṣa's immediate and pressing duties were to

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[1] Watters, I, p. 346.

[2] *Ep. Ind.* IV, p. 209.

[3] H. C., p. 219.

[4] E. H. I, 4th edition, p. 350, see also Ind. Hist. Quart. Dec. 1927, p. 772.

[5] H. C. p. 202.

recover his sister, the widowed queen of Kanauj, from distress, relieve Kanauj from foreign occupation; and punish the treacherous murderer of his brother. Without losing any time he advanced with a huge army to realise these objectives, and on the way was met by Haṁsavega, who had come with precious presents as "confidential messenger" of the king of Prāgjyotiṣa (Assam) to seek an "undying alliance"[1] Harṣa readily accepted, being in dire need of staunch allies to help him in his "first expedition" undertaken, when he was yet young and inexperienced in the methods of war Then permitting Haṁsavega to depart with return gifts Harṣa advanced against the enemy.

Soon he came across Bhaṇḍi, who was in charge of the "Malwa king's whole force, conquered by the might of Rājyavardhana's arm,"[2] and learned from him that Rājyaśrī had been released—or as the poet puts it, "she had burst from her confinement, and with her train entered the Vindhya forest,"[3] where in spite of the dispatch of numerous searchers her whereabouts remained unknown. This news being extremely alarming, Harṣa, in fondness for his distressed sister, bade his army halt by the Ganges, and for the present postponed his march against the Gauḍa king, who was in occupation of Kanauj. Thenceforth, in conjunction with Mādhavagupta and a few tributary kings, Harṣa undertook in all haste the urgent task of finding his sister. He plunged into the depths of the Vindhya forest, and chanced to meet

[1] Ibid., p 211 This was perhaps due to the fact that Bhāskaravarman was afraid of the growing strength of the adjacent kingdom of Śaśāṅka.

[2] H C., p. 224

[3] Ibid. p 224.

the Buddhist sage *Divākaramitra*, the "boy-friend of the deceased Grahavarman".[1] Through his good offices Harṣa succeeded in tracing Rājyaśrī, who, prostrate with grief, was about to become a *Sati*.[2] After rescuing his sister Harṣa desired to take leave of Divākaramitra, but Rājyaśrī was so overwhelmed by the heavy burden of successive misfortunes, and so impressed by the tranquil atmosphere of the hermitage, that she expressed a wish to assume the "red garments." But the sage would not approve of the idea and Harṣa added "My sister, so young and so tried by adversity, must be cherished by me for a while, even if it involves the neglect of all my duties"[3], and "at the end, when I have accomplished my design, she and I will assume the red garments together."[4]

Harṣa then "went back in a few marches to his camp stationed along the bank of the Ganges," and at this point the *Harṣacarita* comes abruptly to an end. In the meantime, however, it appears that on the approach of Harṣa's army Śaśāṅka thought discretion was the better part of valour; and instead of facing an open conflict he withdrew from Kanauj, as after the conclusion of a treaty between Harṣa and Bhāskaravarman he was exposed to serious danger both from the front and the rear.[5]

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[1] Ibid., p. 233

[2] Ibid., p. 241

[3] Ibid., p. 257.

[4] Ibid., p. 258

[5] According to the Ganjam Plate (*Ep. Ind. IV*, p. 141) Śaśāṅka was flourishing as late as the year 619 A.D. It therefore clearly shows that Harṣa could not make any headway against him for a pretty long period.

Bhandi had already cut off the support of the Malwa army after the defeat and death of its leader, and in the face of the new odds arrayed against Śaśāṅka strategy certainly demanded that he should beat a masterly retreat.

Thus Kanauj was left in a hopeless state of confusion deprived as it was of its young Maukhari ruler. The kingdom, however, needed at this time the protection of a strong and guiding hand to inaugurate an era of growth and prosperity, and to ensure immunity from future attack or aggression from any hostile quarter.

Grahavarman had left no heir as the following statement by Patañjali on behalf of Rājyaśrī shows. "A husband or a son is a woman's true support, but to those who are deprived of both, it is immodesty even to continue to live"[1] Besides, the *Harṣacarita* also hints at the "disappearance of all her other relatives,"[2] which expression probably means that the younger brothers of Grahavarman, for he was Avantivarman's eldest son (Śūnasuṅgrajo), had either been killed, or had fled away during the Gupta-Gauḍa disturbance

Should the crown, therefore, devolve upon the widowed queen Rājyaśrī, or was she to be doomed to obscurity, and her claims altogether ignored? But perhaps Rājyaśrī herself was unwilling to undertake the responsibilities and onerous duties of rulership. She was a young and inexperienced woman, and she was under the shadow of a great bereavement and affliction. Besides, she was by nature inclined to the quietist teachings of Buddhism, hence there was little chance of her governing with vigour and success at this crisis.

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[1] M C, p 254

[2] Ibid p. 244.

In the absence of any other Maukhari claimant, should Harsa then be asked to assume the burden and cares of the state on behalf of Rājyaśrī? Both he and his elder brother had rendered signal service to Kanauj during the political whirlpool that had threatened to engulf the kingdom. He had rescued its queen and between the brother and the sister the greatest fondness and attachment prevailed. Harsa had further declared his intention of cherishing her "for a while," even though it meant the neglect of royal duties, which expression probably implies that he was prepared to stay in Kanauj for some time in order to settle its affairs, before he could undertake the fulfilment of his vow to punish those who had become inimical by the "elasticity of their bows"

Accordingly the statesmen offered the crown to Harsa, and Pōnī,[1] whose power and reputation were high and of much weight, addressed the assembled ministers thus. "The destiny of the nation is to be fixed today . . I propose that he assume the royal authority, let each one give his opinion on the matter, whatever he thinks."[2] The chief ministers and magistrates signified their full consent, exhorting Harsa in these words. "reign, then, with glory over the land, conquer the enemies of your country, wash out the insult laid on your kingdom."[3]

But tempting though the offer was, Harsa hesitated to accept it, for it not only implied taking upon himself an additional burden and responsibility, but also permanent

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[1] The name Pōnī is usually identified with Bhandi (Hoernle, J R. A S 1905, p 560, Dr R K Mookerji, *Harsa*, p. 17, note 1), although beyond the similarity in sound there is hardly any justification for it, as we have already shown that the latter was a leading figure in the Thanesvar court, and not in Kanauj.

[2] Beal, I, p 211, Watters, I, p. 343

[3] Ibid.

residence in Kanauj to the neglect of the affairs of his paternal kingdom. Besides, it may be possible that he was not quite sure of the support that he would receive from the people of Kanauj, if he acceded to the requests of their statesmen. Harṣa, therefore decided to refer the matter to the Bodhisattva Avalokiteśvara, who had "evidenced many spiritual wonders," in order probably to see if the omens were favourable to him.[1] The Bodhisattva promised him secret power, so that none of his neighbours should be able to triumph over him, but he further gave the warning 'Ascend not the Lion-throne, and call not yourself Mahārāja.'[2] After getting these instructions Harṣa assumed the royal office with the title "Śīlāditya," and calling himself a mere king's son or "Kumāra."[3]

Now, this modest title of Kumāra definitely suggests that, although according to Bāṇa Harṣa was already king of Thaneśvar, in Kanauj, he was merely charged with the duty of keeping the machinery of the government running, and his political status there was originally no better than that of a guardian, or as Mr N Ray says, "Regent."[4] Indeed this fact is even corroborated by a Chinese work, entitled Fang-chih, which testifies that Harṣa "administered the kingdom in conjunction with his widowed sister."[5]

C. V Vaidya was the first to suggest that this hesitation of Harṣa, referred to by Yuan Chwang, should not be confused with the passage of the *Harṣacarita* discussed above at length (H. M. H. I. Vol. I, pp. 7-9).

[1] Beal I, p. 213.

[2] Beal I, pp. 212-213; Watters I, p. 345.

[3] Ind. Hist. Quart. Dec. 1927, p. 773.

[4] Watters I, p. 345 E. H. I. 4th ed., p. 351.

But it would appear that with the lapse of time, when Harṣa had thoroughly made his position secure, and laid opposition, if any, to rest, he formally transferred his capital from Thāneśvar to Kanauj, and declared himself sovereign ruler of the latter kingdom also by assuming the Imperial titles, which appear in his inscriptions. Thus resulted the amalgamation of the two powerful northern kingdoms, which helped Harṣa greatly in extending the sphere of his influence and suzerainty over the numerous warring states which continually disturbed the political equilibrium of the North.

RAMA SHANKAR TRIPATHI

CLASSICAL AND MEDIAEVAL INDIAN ART

"Mediæval" as well as "classical" are terms coined to designate significant aspects as well as a definite chronological sequence of European history. They were transferred to Indian history in a somewhat vague manner so that "mediæval" is used to label the period after the establishment of the Muslim power on the one hand, whereas "mediæval architecture" for instance is understood to include all the non-Muslim monuments of India from the ninth century approximately to the thirteenth. Whereas then, chronologically Muslim rule in India is taken as the starting point of the new era, culturally on the other hand and referring to the development of art, and specially of architecture, "mediæval" is applied to aspects of Indian life intrinsically almost completely independent of the Muslim factor.

In the case of the "classical," however, its application is still more slipshod. The Gupta age, in all its outstanding achievements, is rewarded with this term as a mark of distinction. The habit of transferring historical labels from the experience of the well-investigated history of Europe to that of India has not fallen into desuetude as yet. From the "primitive" to the "classical" and to the "barocque" is taken by some to be the norm of artistic development, its inevitable biology, so to say. Yet sufficient ground already has been cleared to see some of the main lines of demarcation. Leaving aside those in space, *i.e.*, those of cultural—or art—geography, those that cut across the continuity of time are most provocative of investigation. It is such an incision that separates "classical" from

"mediæval" Indian art, whereas the former is separated at the other end, with equal distinction from "early Indian art"

Where do the limits lie? The one line is drawn at the end of the Maurya period, the other in the eighth century A.D., so that one phase of Indian art extends up to the end of the third century B.C., from the days of Mohenjo Daro downwards: another chapter begins then, *i.e.*, the classical phase of Indian art lasting more than a millennium. This phase is concluded in the eighth century when the last historically completed aspect of Indian art begins to dawn. It was alive in some aspects right into the nineteenth century. This division of Indian art millennia almost in its main aspects, demands an explanation.

Before, however, discussing the agents responsible for these all important demarcations, and in order also to trace them, it will be necessary to point out what are the leading features of each period. It is our task to establish the main periods of Indian art in that manner, which they themselves not only demand but actually dictate by their unmistakably visible features.

It would be premature, at the present state of our knowledge, to generalise about early Indian art of which the earliest examples cannot be later than the middle of the third millenium B.C., and of which the latest specimens belong to the third century B.C. Scarcely anything, however, is known about the art of the intermediate period.

It must be understood that the division into periods, even when derived from the evidence of the monuments themselves, is nevertheless artificial and that the limits in actuality are never as sharply drawn as they are by the intellect that always abstracts from reality in its manifoldness, in order to arrive at a clear cut and

serviceable scheme. Such, however, is the drawback of all thought confronted with the richness of reality, and the objection of "survivals" of the early period in much later phases is as valid as it is immaterial in the present connection. Survivals, as a matter of fact, are more pertinacious in the case of Indian art than elsewhere. Features, for instance, of the 'early period' survive, in spite of the change brought about within the Śunga period, in the Kuṣāṇa and even in the Gupta age and they are given a new lease of life in the "Middle age."

But it is not with these under-currents, immortal almost in the process of Indian art, that we propose to deal, but with those movements that are leading and give their impress to the period concerned.

The early art of India has realism and dignity of static pose as its aims. The various animal devices on the seals of Mohenjo Daro and Harappa show this as clearly as the figures and reliefs of animals on the capitals of the Mauryan pillars. The main difference between these two lies in a rendering full of a delicacy, elegant and slightly degenerate in the early instances, sturdy, however, and suggestive of a satisfied well being in the heavier bulk of Mauryan sculptures. What is so obvious in the rendering of animals applies as well to the human figure. The "priests" of Mohenjo Daro excel in a subtle rigidity of pose and modelling, the "Yakṣas" etc., of Mauryan date, however, have put on flesh to give outer weight to an undiminished sense of self-assured importance. The earlier sculptors based their plastic vocabulary on sinews and skin, the later sculptors, however, give preference to muscles. The main intention remains unchanged and its various possibilities are explored at various periods. The Mauryan age replaces the strained sophistication of the Mohenjo Daro period by domestication and a sense of well being. Where

the real and fabulous creatures of Mohenjo Daro are realistic with an effort to be so, those of the Mauryan period are at ease on this earth, and this is shown manifestly by their proudly carried bodily bulk.

Apart, however, from such weighty figures, figurines with graceful carriage and realistically modelled facial features prove that the lighter side of life too was given its share in the earth bound art at this period.

A radical change, however, set in after the downfall of the Mauryan empire, about the second century B.C. The reliefs of the railing of the stūpa of Bhārhut show this well. The cubical and compact are replaced by flatness and linear movement, realism is no longer a leading feature and an abstract curvilinear design holds the sway. Taking into consideration that at Bhārhut too the symbol looms large and its treatment is consistent with abstract and linear conceptions, the aniconic rendering of the Buddha appears in a light somewhat different from that thrown on it by considerations exclusively Buddhistic. For, in Bhārhut there appears on one medallion a purely geometrical design, unrelated to any sort of naturalistic representation, a purely decorative pattern to the eye, suggestive, however, of deeper associations to the mind. The Aryans in short are well known not to have thought in terms anthropomorphic. This naturally excluded their making images or altogether appreciating a man-made confirmation of the outer appearance of things. Yet in them stirred strongly a sense of rhythm, to which they not only gave expression in hymns, but also in their handiwork. "Abstract" ornamentation must have been their innate and exclusive tribute to visual art. Their making India their home, however, brought about compromises and assimilations, so that when we come to the days of Bhārhut, the process, having gone on for many centuries, seems completed. Whereas the invading Aryans had been averse to

ndering the likeness of any living form, the people whom
ey found in the country excelled in it. This is clearly
e case with regard to the Indus civilization. In what
ms the other pre-Aryan people of India expressed them-
lves in art, although it cannot be proved by equally
cient examples, can yet be deduced from the sculptures
f Central and Southern India, contemporary with and
ter than Bhārhut. Save for the use of symbols in lieu
f the Buddha and for the one instance mentioned above,
e reliefs are teeming with figures of animals, men
nd plants

But those figures do justice to their two-fold origins.
n the one hand they do represent actual objects,
hile on the other they are but a bundle of curves
ssembled under the label of a definite object. Thus,
hile earthbound "early" Indian art had found its
lfilment prior to the Śuṅga period, it is at this moment
at an art that may be called "classically" Indian
ises. What justifies this designation? If by "classical"
e understand the balance of opposites and their
tegration into an organism, vigorous in the wealth
its components, that grows exclusively fed by
s own resources, laying stress now on this, then on
at of its possibilities with greater zest, yet never
sing within this circumference its stability, the art of
dia from the Śuṅgs to the end of the Gupta period
serves this high mark of creative distinction in exactly
e same manner as the art of Greece from the fifth to
e sixth century B.C.

Within this widely spaced limits there are, at the one
nd the possibility of "frank hedonism" (Dr Coomaras-
amy) of the days of Sāñcī, and of the spiritualism of
upta sculpture, on the other. But neither would be the
rt "classically Indian" without the rhythmic exuberance
at supports it nor could Gupta sculpture attain its

sublimation without the sophisticated sensuousness that underlies it. The high tension between realism and abstraction, sensuousness and spirituality, description and rhythm is maintained throughout. It only depends which point we focus on that arch of attainment. Viewed as a self-contained classical period, the difference between the work of Sāñcī, for instance, and that of the masters who worked in Sārnāth in the later Gupta age, in spite of many more years that passed between those two, is not greater than that which divides the paintings of, say, Uccello from those of Raffael. Classical youth and classical maturity have features in common in the Italian Renaissance, in Greece and in India.

If the equilibrium of forces gives the impress of the classical to this period, it still remains to be said what makes it classically Indian. In a deeper and more universal sense than at any time before or after, it has given expression and definite form to what is unique in the Indian mind in its creative aspect. While all early art in this country may be understood as a highly specialised, but nevertheless coordinate form of expression with those of Mesopotamia and Asia Minor, it is only after the downfall of the Maurya, that visual art begins to comprise the range of inner experiences, so peculiar to this country, and to express it in a context of form, entirely its own. While then, geographically the early art of India, asserting nevertheless its own individual features, is that of the Southernmost province in the Western half of Asia, classical Indian art is entirely India's own, wherever may have been the ultimate origin of one or the other of its components. There truly India is the motherland that has brought forth its art as it has moulded its people. So it remains for some time.

The two centuries following the downfall of the Gupta empire are the great aftermath of its classical height. Yet

in them tremors already stir under the surface. It was their destiny to shake the classical equilibrium. While now certain features are becoming overemphasized and strained, others are suppressed. The realistic component recedes more and more, and such abstractions that formerly were mitigated by their intimate proximity with naturalistic features now have become undisputed rulers. They distort whatever there may be left of the mature spontaneity of the classical period. Sharp and rigid the single features appear if compared with the flexible fullness of bygone ages. Yet what has become forgotten of the living beauty of things has been overcompensated by a forcibly rendered rhythmical design. A novel content of form, woven of clear cut linear movements where the linking of their strong threads is mellowed partly or emphasized dramatically by an ever-varying play of light and dark, has come to oust the sensitively modelled and essentially plastic conception of the classical age.

Thus we had understood as complete equilibrium of heterogeneous trends. Than carriers were the descendants of races, widely dissimilar in outlook as well as in their artistic temperaments. Without the Aryan invasion classical Indian art would not have been possible. It took, moreover, many centuries for the interpenetration of Aryan and pre-Aryan elements to become artistically creative and to bring forth India's classical art. In the meanwhile the old trends persisted. When about the beginning of the Christian era Northern invaders once more began to settle in India, they again gradually coalesced with the population they found there. Such invasions occupied more than five hundred years. The invaders, various tribes of Northern nomads, became sedentary and eventually were absorbed in the Indian population. This, it need not be said, was then already of mixed extraction, the Aryan element forming one of its main

constituents. This Northern component then, after about one millenium and a half of Pre-Aryan infiltrations, became strengthened by novel Northern admixtures. Similar to, yet not to the same extent as prior to, the classical age of Indian art, it took centuries before this renewed composition of the Indian race found its relevant artistic expression. The interval between the Aryan immigration in the middle of the second millenium B.C. and the classical age of Indian art, therefore, is considerably longer than that between Kuṣāṇa rule and the mediaeval type of Indian art.

Why then has Indian art from the ninth to the sixteenth century and in certain aspects down into the nineteenth century, been called mediaeval? A chronological coincidence, for the greater part of this period, with the middle ages of European history is certainly more than an accident, yet merely analogous features are not a sufficient reason for this designation.

Mediaeval, in its cultural and ethnical significance, presupposes on the one hand a classical stage of art, while on the other, it indicates a dislocation and transformation of the classical heritage, until by far the majority of its features are remodelled under a new point of view. The carriers of these novel notions are invariably Northern and Nomadic races.

As the Mughal phase in its relation to the periodology of Indian art lies outside the scope of this note and has been dealt by me elsewhere,[1] the three main phases of Indian art, the early, the classical and the mediaeval, prove to be intimately connected with the racial history of the country.

STELLA KRAMRISCH

[1] *Origins of Mughal Paintings* (In collaboration with Prof. Strzygowski; in the Press.)

BĀLA-GOPALA-STUTIH

A NEWLY DISCOVERED ILLUSTRATED MS

The calculated neglect of the graphic arts in our schools and colleges, while it has helped to cut off the present generation from anything like a contact with Indian Art, the finest flower of Indian civilization has helped to produce in the average types of cultured people an attitude of indifference and neglect as regards the preservation of the relics of old Indian Art. It is realised by few Indians that India is being continually drained of very valuable products of old Indian Art, and many invaluable masterpieces and documents for the history of Indian Art have passed out of India during the last few years. In order to save for the nation the famous MS. of the Luttrell Psalter and the Bedford Book of Hours—an array of British donors subscribed through the National Art Collection Fund a sum of £18,107 13s. 6d.! Unfortunately not a single lover of Sanskrit literature—or of Indian Art—could be found to retain in India an unique illustrated MS. of *Bāla-Gopāla-stuti* which was my good fortune to discover in 1929.

Both as a literary curiosity of unique interest and as a valuable document of Indian Painting, this illustrated MS. was a discovery of great significance to Indian culture. The author of this work is no other than Vilva-mangala Thākur, also known as Līlāśuka, the well known Vaiṣṇava saint and hagiologist, who though hailing from Southern India (Tirunavay, British Malabar), travelled widely and was one of the first pioneers of the development of devotional Vaiṣṇavism. One should like to designate him as the 'Jayadeva of the South.' But he

really belongs to the whole of India, as it is very well known that his most popular *Kṛṣṇa-Karṇāmṛta* hymns are sung all over India. The MS. of *Bāla-gopāla-stuti* hailing, as it does, from some parts of Southern Rajputana or Guzerat, one of the important strongholds of Vaisnava culture, attests to the popularity of the great poet-saint of the South and of his hymns in such a distant corner of India. The MS. in question has a valuable colophon which gives the name of the author:

Iti Śrī-Puruṣa-hariṣa-pravāṇuka-Śrī-pāda Vilvamaṅgala-praṇīta-Śrī-Bāla-Gopāla-stuti | *Iti Māgha-purāṇe Bhagavad-Vākyam* ||

The allusion to *Māgha-purāṇa* and that the hymns form part of that *purāṇa* is rather curious. A *purāṇa* of this name is not known to me and does not certainly find place in the list of eighteen *purāṇas* known to students of Indian literature. Jīva Goswāmī, the famous commentator of the Śrīmad Bhāgavata in his annotations on the tenth *skandha*, refers to a work called *Māgha-smṛti* in the following words "*pravāṇukā nadane, iti Māgha-smṛtiḥ*." It is impossible to say if the *Māgha-smṛti*—referred to above—is the same as the *purāṇa* of same name referred to in our colophon. For all that we know, *Māgha-purāṇa* may have been an anthology, collection, or encyclopedia of Vaisnava hymns, in which the *Bāla-Gopāla-stuti* found an honourable place, for the hymn is glorified as the Word or message of the Lord himself (*Bhagavad-vākyam*).

The MS. is not dated, but the style of the pictorial illustrations affords valuable data for chronology. For reasons set down elsewhere, I have dated the MS. earlier than a related MS. with analogous illustrations, known as the *Vasanta-Vilāsa* which bears date Samvat 1508, equivalent to 1451 A.D.

The MS. which is on paper, undoubtedly belongs to the period when palm leaf has just begun to be supplanted

by paper. And one of the reasons for preference for paper as a writing material, (particularly in the area from which this MS comes), may have been the facility the medium offered for pictorial illustrations.

The hymns are composed in very highly flown Sanskrit with rhetorical flourishes and are of no little literary merit as the quotations will demonstrate. As is well known to students of Vaiṣṇava literature, the descriptions of the various pranks (*līlā*) of Kṛṣṇa offer opportunities for divergent literary flavours (*rasa*), varying from the *vātsalya* to *śṛṅgāra rasa*. We can only dive into this well of sweetly lyrical hymns at random, as it is not possible to make long quotations, nor does the fragmentary condition of the MS justify such a course.

TEXT

Yaśodayā gāḍhamulūkhalena
Gokaṇṭha-pāśair nibadhyamānaḥ |
Sammārdayan pāṇitalena netre
Ruroda mandaṃ navanītacaurāḥ || 21

TRANSLATION

'Tied by Yaśodā tightly with a cow halter to a mortar, rubbing his eyes with the palms of his hands, the Butter-thief wept quietly'

TEXT

Manthānam apahāya manthitum dadhi na kṣamas tvaṃ
Bālo'si vatsa viramasīti yaśodayoktaḥ |
Kṣīrābdhimanthanam iva smṛtvā tato'sau
Vāmaccheyadam diśatu vo Vasudevasūnuḥ || 53

TRANSLATION

"Leave off the churning-rod. You are no good at churning curd. Stop, you are too young my child!" When Yaśodā thus spoke to Him, He remembered the churning of the Ocean, of milk and smiled. May Kṛṣṇa dispel illusion for you.

As a document of Indian Painting our MS. is of exceptional interest. Written on paper of the size of $9\frac{1}{4}'' \times 4\frac{3}{4}''$, the MS. bears on each page, generally on the left side, the text of the hymn in seven or eight lines, with a miniature illustration of one or other episodes from *Krṣṇa-Līlā*. The MS. contains about 30 folios, each bearing a miniature illustration of the size of $5\frac{3}{4}'' \times 4\frac{1}{4}''$. Illustrated Indian MSS. particularly in Sanskrit are so rare that this discovery must be hailed as a very unique example in which the calligrapher and the artist have collaborated to produce what must be regarded as a valuable jewel of Vaiṣṇava culture. The style of the illustration is easily related to the school of "Southern Rajasthani" or "Gujarati" Painting, which was a few years ago erroneously designated as the "Jaina School." The discovery of the famous dated MS. roll of *Vasanta Vilāsa* helped to revise the nomenclature of the school. Though a very large volume of Jaina canonical literature is illustrated in this style, it belongs to a form of pictorial illustration which is not coterminous with the Jaina MSS. in which we have a canonical application of a general vocabulary of the mediæval *pālas* of Indian painting current in Southern Rajputana and which had its sectarian as well as non-sectarian uses. In the *Vasanta-Vilāsa*—an anthology of erotic poems—the illustrations afford an application of the style to non-sectarian themes. While in the *Bāla-gopāla-stuti* we have the same style of miniature adopted to illustrate a Vaiṣṇava theme of an avowedly Hindu Brahminic purpose. The outstanding feature of the style is a quality of pure draughtsmanship, characterized by a self-sufficient, if somewhat, arbitrary formula of line-drawing—which is sometimes stereotyped in formalized patterns and poses, but which lends itself to a remarkably free and rhythmic gestures and movements of peculiar

A Page from a Manuscript of
VĀLA-GOPĀLA-STUTI,
with colophon, dated circa 1425 A. D.

expressiveness and graphic power, marked by a quality of joyousness which finds expression in a daring *bravura* of technique. Anyhow this MS. offers significant evidence of a happy link between the literary and the graphic arts at a period of Indian culture when the artist and the literary man met on a common platform in a harmonious unity,—the two forms of culture living and growing under the inspiration of a religious fervour and collaborating on identical themes.

O. C. GANGOLY

THE GODDESSES OF LEARNING IN JAINISM*

Of all the conceptions found in the Jain Iconography, none is so original as the conception of the *Vidyādevīs* or the Goddesses of learning. They are sixteen in number. In no other Indian religion are the goddesses of knowledge so numerous. Besides the sixteen *Vidyādevīs*, the Jains of both sects admit into their pantheon, one *Śruta-devī* or *Sarasvatī* approximating very closely the Brāhmanical conception of the same goddess. She seems to be at the head of the collective body of the sixteen *Vidyādevīs* and her worship is prior to that of other subordinate deities. Her name as *Śruta-devī* meaning 'Goddess of *Śruti*' originally refers to the Vedas or 'revealed literature' preserved through hearing. There is some hidden meaning behind this name. The description of Śruta-devī as afforded by the Jain books makes it on a par with Brahmāṇī's (wife of Brahmā) description.[1] And Brahmā is known to hold, in his original image, the *Vedas* or the Ancient Scripture. The Jains, like the Brāhmaṇas, make a special ceremony of her worship on the Śukla Pañchamī day of the Kārtika month, which they call 'Jñāna Pañchamī.' On that special anniversary day of

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* Materials of this paper have been mainly drawn from Jaina MSS preserved in different *Bhāṇḍāras*. It may be found from quotations cited that the texts are not free from mistakes. The text called the *Prati-śrāddha-śrāddha* is sometimes unintelligible on account of linguistic errors. But errors of a MS. need not be corrected. Information has been carefully gleaned out of them relative to our subject.

B. C. Bhattacharya.

[1] ॐ ह्रीं श्रीं नमो नमस्ते ब्राह्मि जीवापुस्तकमालाहस्ते हंसोपरि इह चलिष्यते आगच्छ ।

Ācāra-dinakara, Pratiṣṭhāsūdha.
(MS. R. B.)

Cf. the description of Śruta-devī, *infra*.

knowledge, the devout people fast, worship the books and install them carefully dusted. The conceptions and imageries of the other sixteen goddesses of learning, if analysed, disclose clear points of identity in respect of names, attributes, etc., with those of the Jaina Yakṣiṇīs. This leads us to assume reasonably that the *Vidyā-devīs* in conception were modelled after the Yakṣiṇīs. The reverse would have been assumed as well but is inadmissible on the ground of the priority of the Yakṣiṇīs as connected in mythology and ritual with the Tīrthaṅkaras in Jainism. The sixteen divinities under the name of the Vidyā-devīs may be *prima facie* supposed to sway the sixteen arts and sciences but the texts of Jainism give a different clue, namely, that through their worship the devotee gets knowledge, character, religion, effort and mental qualities of many kinds.[1] Really speaking, in point of fact, these qualities lie at the bottom of all education, whether literary, artistic or scientific.

Sarasvatī or Śruta-devī:

The goddess, as viewed by the Śvetāmbaras rides a swan, has four hands bearing a lotus, lute (or *Vīṇā*), book and rosary.[2] The Digambara texts seem to give the vehicle of a peacock to Sarasvatī.[3]

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[1] ज्ञानचारित्रतपसु सूरि पुस्तकेष्वनुकूलतया च । etc.

Pratiṣṭhā-Sāroddhāra.

[2] श्वेतवर्णां श्वेतवस्त्रधारिणीं हंसवाहनां श्वेतसिंहासनस्थां . . . . . चतुर्भुजां श्वेतपद्मवीणापुस्तकाक्षमालाधारिणीं सुखासनसमासीनां सकलकलाविज्ञानकरीं ।

Ādīśa-dinakara Pratiṣṭhākalpa p. 146. (MS., Rāṅghaṭe Collection, Benares.)

Cf. *Nirvāṇakalikā* MS. Jaina-Mandira, Agra)

[3] वाग्वादिनि भगवति सरस्वति ह्रीं नम इत्येनेन मूलमन्त्रेण जपेत् । . . . ॐ ह्रीं मयूरवाहिन्यै नमः इति वाग्देवतां स्थापयेत् ।

Pratiṣṭhā-Sāroddhāra.

JAIN SARASVATI

[From Bikaner State]

A number of images of Śruta-devī have been compared by me. In all cases, the symbols of a book, lotus or a swan are to be noticed. But a strict observance with the canon has not been observed in any case.[1]

Śruta devī, the main goddess of learning, seems to be identical with the consort of Brahmā, a Dikpāla, as described in my *Jaina Iconography*.[2] The attributes of a lute, book and rosary are common. The vehicle of swan is also characteristic of Brahmā. The substitute of peacock for swan, as made by the Digambara sect, agrees with the conception of Sarasvatī, who is also the river-goddess in Brāhmaṇas.[3] The Jain literature, so extensive even as it exists at present, has been presided over by this goddess.

Rohiṇī, the Vidyādevī

The description of this goddess, as in other cases, varies with the two sects. With the Śvetāmbara, she rides a cow and holds in her hands a conch, rosary, bow and arrow.[4] With the other sect, she appears bearing the attributes of an urn, conch, lotus and fruit.[5]

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[1] A two-handed image at the Lucknow Museum No. 8 2/507 is the earliest. Cf. A four-handed image from Pallu, Bikaner.

[2] In the Press. Another at Deogarh Fort, Serial No. 2252.

[3] See "Indian Images," Part I, pp. 43-44.

[4] बलदाम-नाराचधारिणी चतुःकरा कुन्दतुषारगौरा ।
गोवाहिनी गोतवरप्रभावा श्री रोहिणी सिद्धिरियं ददातु ॥

Acārya-dinakara

Cf. Nirvāṇa-kalikā (MS. Agra Library).

[5] बिभ्रत्य ये। जेहगुली' नागमे इहि' चिंतामणिपरा ग्रथमे ।
क कुम्भशङ्खाब्ज फलान्वुजस्थितार्थ से रोहिणी सकलम् ॥

Pratiṣṭhā-Sāroddhāra.

We shall gradually see that most of the names of the Vidyādevīs are in common with those of Yakṣiṇīs, specially of the Digambara sect. In this case, Rohiṇī is also the name of the consort of Mahāyakṣa, who attends upon Ajitanātha. From the text of the Śvetāmbaras, it appears that she specially presides over the art of music. The Digambaras believe that by her worship, the devotee attains right insight.

Prajñapti :

In her Śvetāmbara aspect, she rides on a peacock and holds a lotus and a *śakti*.[1] According to one text of the same school, she holds *varada*, *śakti*, *pāśa* and *śakti* again.[2] The Digambara image should be represented as bearing a sword and a disc.[3]

Prajñapti is identical in name with the Digambara Yakṣiṇī of Saṁbhavanātha. Thus, we find she has borrowed the vehicle of peacock from the Yakṣa Trimukha, Prajñapti's husband. The peacock symbol with lotus should be Vidyādevī's characteristic. The name might have been derived either from Prajñapti, meaning 'intellect' or *Prajñā*, meaning 'Sarasvatī'.

Vajra-śṛṅkhalā

Two forms of this goddess are known to the Śvetāmbara scripture. In one form, she is seated on a

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[1] [illegible]

Ācāra-dinakara (Rāmghat MS)

[2] [illegible]

Nirvāṇa-kalikā

[3] [illegible]

Pratiṣṭhā-Sāroddhāra.

lotus and carries a chain and a club.[1] In another form she is also seated on a lotus but has four hands adorned with *varada-mudrā*, chain, lotus and chain again.[2] The Digambara text mentions only a chain for the deity.[3]

We meet with the goddess of the like name in connection with the Yakṣiṇī of Abhinandana. But, in no point, the two deities seem to agree with one another. The Śvetāmbara form, however, of the Yakṣiṇī has a lotus seat like Vajra Śṛiṅkhalā. According to the Digambara text used, she grants to her worshippers good boons and habits.

Vajrāṅkuśā[4]

She, too, has two forms according to Śvetāmbara texts. In one, she rides an elephant and bears as symbols a sword, *vajra*, shield and spear.[5] In another, she is riding an elephant in *varada-mudrā*, *vajra*, *cirus* and goad.[6] The Digambaras represent the deity as driving in an aerial car and holding in her hands a goad and a lute.[7]

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[1] [illegible]

Ācāra-dinakara.

[2] [illegible]

Nirvāṇa-kalikā

[3] [illegible]

Pratiṣṭhā-Sāroddhāra.

[4] [illegible]

Ācāra-dinakara.

[5] *Nirvāṇa-kalikā*

[6] [illegible]

Pratiṣṭhā-Sāroddhāra.

The Vidyādevī of the present description bears the same name as the Śvetāmbara Yakṣiṇī of Anantanāth. Some symbols of the Śvetāmbara form and others of the Digambara form, such as sword, spear and goad come to be equal to those of the Yakṣiṇī. The symbol of an elephant, the name Vajrāṅkuśī meaning 'one adorned with *vajra* and goad' leads us to suppose some mysterious connection between this Vidyādevī and Indra. Her lute, as given by the Digambaras, is only a symbol of Sarasvatī.

Apraticakrā or Jambunadā

According to the Śvetāmbara books, she rides a Garuḍa and all her four hands are armed with discs.[1] She is called Jambunadā by the Digambaras, who represent her as riding a peacock and bearing a sword and a spear.[2]

Apraticakrī by name and symbols bears equality with the Yakṣiṇī of Ṛṣabhavanātha. This Vidyādevī may have some remote relation to Vaiṣṇavī, the wife of Viṣṇu, as Jambunadā seems to have relation with Kaumārī, the wife of Kārttikeya. Peacock and spear are in this form the common characteristics.

Puruṣadatta.

In Śvetāmbara literature, she is differently described. In one aspect, she holds a sword and shield,[3] in

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[1] चक्रेश्वरी-शासीना.. गुरुडारूढ चतुर्भुजा चक्रवारिणी । श्री अप्रतिचक्रये.....।

Ācāra-dinakara.

Cf. *Nirvāṇakalikā*

[2] खड्गेखड्गे कमेपके च वीणाखड्गौ तथा खेटिनिस्था ।
जाम्बुनदाख्या दुरुद्धकुन्ता अम्बुनदे स्वीकृत शक्तिधारा ।

Pratiṣṭhā Sāroddhāra.

[3] *Ācāra-dinakara*

another, she rides on a buffalo and carries in her four palms *varada*, sword, citrus and shield.[1] The Digambara text makes her ride a peacock and hold as symbols *sarva* and a lotus.[2]

We meet with the Yakṣinī of the same description as the wife of Tumbaru, the attendant of Sarvaṇ. The buffalo vehicle indicates strongly the Vidyādevī's original relation with the wife of Varuṇa, who characteristically moves on the back of the same animal.

Kālī

The Digambara image of this Vidyādevī should ride a deer and should be furnished in its hands with the symbols of a staff and sword.[3] There are two Śvetāmbara forms to be marked. She is seated on a lotus and holds either in two hands a club and *varada* or in four hands rosary, club, *varṣa* and *Abhaya*.[4]

She has similarity in name and certain symbols with the Śvetāmbara Yakṣinī of Abhinandana. The Digambara goddess, though having denominational similarity with the Yakṣinī of Saptiśvanātha of the same sect, seems to have been modelled after the type of the wife of Vāyu. This is strongly suggested by the common characteristic symbol of a deer as vehicle.

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[1] पुरुषवाहनां वरदाक्षसूत्रां महिषीवाहनां खड्गं च वरदाक्षिणकरां मातुलिङ्गखेटकयुतवामकरां ।

Nirṇaya-kalikā

[2] कंकालिनी मयूरारूढा सर्वे सिता पुरुषदायिकेत्याद्य ।

Pratiṣṭhā Sāroddhāra

[3] वरतरुतरुणी भव कालि कर्मजा मृगपा मुरुपालिकला ।

Ibid

[4] विकचकमलवासा चाम्रमूलकुलदण्डकलुक्ष तल तरीय वाणी ।

Āśā-dinakara

Cf. *Nirṇaya-kalikā* for the description of the same.

Mahākālī:

The Śvetāmbaras have two descriptions for the goddess. According to one, she rides on a man and holds a rosary, fruit, bell and *Varada mudrā*.[1] According to another, she equally rides a man but holds a rosary, *vajra*, *Abhaya mudrā* and bell.[2]

The Digambara form of Mahākālī is to be represented as standing on a corpse and bearing in her hands a bow, sword, fruit and weapon.[3]

Though the Yaksiṇī of the like name, the Śvetāmbara one of Sumatinātha and Digambara one of Suvidhinātha, exists in Jaina Iconography, the Vidyādevī named Mahākālī partakes more of the nature of Kālī of Brāhmanism than of the same Yaksiṇī. The symbols of sword, bell, rosary, etc., are sufficiently tāntrik in character, the corpse at the feet of the goddess being a true mark of Kālī. The Digambara book states that the goddess grants religious trance (*Samādhi*) to her worshippers.

Gauri:

She of the Śvetāmbara type rides on an alligator (गोधा) and bears four hands equipped with *varada*, club,

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[1] मातङ्गजा मातङ्गसेपहोल्लसन्ना दक्षिणहस्तेषु जपमालिका फलिकाघण्टाधारिणी ... ... महाकाली ॥

Āchāra-dinakara.

[2] महाकाली वेणी पुरुषवाहनां चतुर्भुजां जपमालासुवज्राङ्कित-दक्षिण-करद्वय-अभयाङ्कुश-वामकरां ॥

Nirvāṇa-Kalikā.

[3] चतुर्भिर्हस्तैर्युतां ॥ मडकर्णित सेवमाना मरमाधिकरा ।
स्वामलकुः स्वाङ्गलाकाङ्क्षा वहि महाकालि जुगरव मान्दी ॥

Pratiṣṭhā Sāroddhāra.

rosary and water lily.[1] In Digambara form, too, Gauri has an alligator as her vehicle and holds lotus as her symbol.[2] There is also Gauri, the Digambara Yakṣiṇī of Śreyāṃsanātha. Some of her symbols, such as lotus, *varada*, are identical with those of this Vidyādevī. As an alligator is mythologically associated with a form of Brahmāṇī, Gauri or Durgā, we have reason enough to infer that the goddess' model came after her. The alligator (Gengetic) and some of the symbols such as water-lily and urn indicate her connection with the goddess Gangā of Brāhmaṇism.

Gandhārī

The Śvetāmbara Gāndhārī is to be represented either as seated on a lotus and holding a staff and *vajra* or *varada*, staff, *Abhaya* and *vajra*.[4] Digambara goddess rides a tortoise and holds a disc and sword.[5]

We meet with the Śvetāmbara Yakṣiṇī of the like name, who belonged to Nami. Her *vāhana* vehicle gave her the character of Sarasvatī. The Yakṣiṇī Gāndhārī of the Digambaras rides a crocodile but the Vidyādevī Gāndhārī rides a tortoise. This latter point leads us to

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[1] गोधाक्षत-तलाक्षीला कुम्भकर्ण्यविभ्रमा.....।

Ācāra-dinakara

[2] वीणां हेमं, गोधाकरवां चतुर्भुजां वर-कुम्भ-कुम्भ-कुम्भ-कलिकाहस्तां कमलासनां कुमलवाहां कुम-वाहस्तां।

Nirvāṇa-kalikā

[3] गोधासना हेमवर्णा हस्ते वीणे कमण्डलुं वरदं चाक्षे ॥

Pratiṣṭhā Sāroddhāra

[4] गोधापक्षिमकरकाकुरुकं वर्णाहस्तोरुकं कमलीवा नलकान्तिकमारी-गोधुवां वहाम।

Ācāra-dinakara

[5] चक्रासिधुल कुर्मगमीजनुर्णी गुहाया गान्धारी वदनिमवाम ॥

Pratiṣṭhā Sāroddhāra

connect her with Yamuna, as the preceding Vidyādevī was suggested to be associated with Gangā

Mahāyālā or Jhālāmālinī

The text called the "*Achāri adinakara*" of the Śvetāmbaras describes this goddess as riding a cat but mentions no attributes. The *Nirvāna-kalikā* another text of the same sect describes her as riding a boar and holding many weapons without description.[1] Images of Digambara type should ride a buffalo and bear such weapons as a bow, shield, sword and disc.[2] The Yaksinī of similar name we find as attached to Chandraprabhava. The Śvetāmbara Yakṣiṇī has a cat as her vehicle like the present goddess and the Digambara also has the common vehicle of a buffalo. The underlying idea of the Jhālāmālinī representation seems to have been derived from the consort of Yama whose symbol is a buffalo. The cat symbol is also held by a Brāhmanical deity named Ṣaṣṭhī. It is, indeed, difficult to say which idea is older, the Jaina or the Brāhmanic.

Mānavī

According to one text, she has blue colour and sits on a blue lotus and a twig.[3] According to another of the same Śvetāmbara school, she sits on a lotus and is four handed showing *varada*,[4] rosary and a bough of a

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[1] महिषारूढा मकरध्वजा [illegible] [illegible] [illegible] [illegible] ।

Nirvāṇa-kalikā

[2] [illegible] चतुर्भुजेटकलाकचक्रायुधा महिषारूढा महिषाधिरूढा ॥

Pratiṣṭhā Sāradhāra

[3] नीलाङ्गी नीलाब्जोपरिस्थिता वृषभासनाकरणवरदा सर्वेषां मङ्गलं मानवी वशात् ॥

Āchāra-dinakara.

[4] *Nirvāṇa-kalikā.*

[1] The Digambara text also describes her as of colour and as riding a boar and bearing a trident. Vidyādevī has a parallel in name to the Śvetāmbara of Śreyāṁsanātha and in the Digambara Yakṣī talanātha. The former parallel does not seem to be but of mere name. Śitalanātha's Yakṣī as ad d by the Digambara school presents a similarity of e and vehicle. Stress has been laid on the Vidyādevī's r being blue and in this connection, one is led to some faint relation between her and the Nīlasarasvatī hmapura. The boar symbol would connect the le deity with Vārāhī, having the same vehicle.

ofs:

The Śvetāmbara text represents the goddess as riding a snake and carrying in her hands a sword, snake, d and snake.[2] The Digambara Vidyādevī rides a and has a snake symbol.[3] The Yakṣī of the tical name occurs in the Digambara Iconography and ngs to Vimalanātha. Her vehicle and symbol in the instances consist of snakes. That there exists ure cognateness between the conception of the ādevī and the Yakṣī is clearly indicated by a mbara text which, in an invocation calls the latter dyādevī.[4]

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[1] सर्वं विश्वदो सावयी वेषिकन्टवीका किटिका सकल त्रिशूला ।

Pratiṣṭhā Sāroddhāra.

[2] वैरोट्या श्यामवर्णा भुजगवाहना खड्गभुजंगसहितहस्ता ।

Nirvāṇa-kalikā

[3] स्वां सि इगा-भाग-हवं-सर्पा वज्रेश्व वैरोटिकोग्रनीलाम् ॥

Pratiṣṭhā Sāroddhāra.

[4] वैरोटी इतिनामधेयं । ॐ ह्रीं विद्यादेवी इदं ॥

Pratiṣṭhā Sāroddhāra.

Achyutā.

She is called in the Śvetāmbara literature Achnptā and described as riding a horse and holding a bow, sword, shield and arrow.[1] Achyuta as represented by the Digambaras equally rides a horse and holds the symbol of a sword.[2]

Mānasī

Mānasī of Śvetāmbara conception has two types in iconography. According to one, she rides a swan and bears the attributes of *varada* and *vajra*.[3] According to another, she sits on a lion and has four hands carrying *varada mudrā*, *vajra*, rosary and again *vajra*.[4] The Digambara Mānasī seats herself on a snake vehicle.[5]

Mānasī by name and by the symbol of swan, *vajra* and lion seems to be based upon a mixture of ideas. The swan symbol is very apt and is in keeping with the traditional emblem of the goddess of learning. The Buddhist deity of learning called Vagīśvarī,[6] who has a famous

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1 [illegible] । [illegible]

Ācāra-dinakara.

2 [illegible] ।

Pratiṣṭhā-Sāroddhāra.

3 [illegible] ।

Ācāra-dinakara.

4 [illegible] ।

Nirvāṇa-kalikā.

5 [illegible] ।

Pratiṣṭhā Sāroddhāra.

6 वागीश्वरी = सरस्वती

Trikāṇḍaśeṣa

temple in Benares rides on a lion. Thus, there must be some undercurrent of interrelation in the symbolism. She rides a tiger. In this case, the Digambara Vidyādevī rides a snake. This appears to be due to the fact of *Mānasī* and *Mānavī* having the same literal sense.

Mahāmānasī

The Śvetāmbaras describe the sixteenth Vidyādevī as riding on a lion and bearing, in her four hands, *varada*, sword, *kamaṇḍalu* and lance.[1] The Digambara representation of the goddess sits on a swan and holds a rosary, *varadamudrā*, goad and garland.[2]

Again, the conception of this Vidyādevī is presumably based upon that of Vāgīśvarī. The sword symbol specially corresponding to the Digambara Yakṣī of like name is Nirvāṇī of Jina Śāntinātha. As noticed before, her symbols of book, *kamaṇḍalu* and lotus befit more a Vidyādevī than a Yakṣiṇī. The Digambara conception of Mahāmānasī either as a Yakṣiṇī or Vidyādevī has symbols such as, peacock, swan, rosary, which fit in with the characteristics of the goddess of learning.

B. C. BHATTACHARYA.

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[1] महामानसी चतुर्भुजा सिंहवाहना। चतुर्भुजैः वरदाक्षिकुक्ष दक्षिणकरा कुलिश-पाश-कुन्त-धारिणी।

Nirvāṇa-kalikā.

[2] [illegible]

Pratiṣṭhā Sāroddhāra.

D 1641—THE GREAT TEMPLE IN 1798, Tanjore

THE ECONOMY OF A SOUTH INDIAN TEMPLE IN THE CŌLA PERIOD

Every age finds its most characteristic expression in some institution or other. As the factory or the railway station may be considered typical of the nineteenth century Europe, so the temple gave typical expression to the life and culture of the Southern India for several centuries in the middle ages. This modest study of a celebrated temple and its foundation may not be inappropriate as a tribute to the Founder of the Hindu University.

We are apt to think of the temple primarily as a religious institution, whether as perpetuating the memory of some dead hero, or as enshrining the symbol of the Absolute for rendering meditation upon it, easier or only as providing more or less comfortable dwelling places for a numerous pantheon of superhuman beings whom it is wise to placate in various ways, the temple rests on some form of religious belief for its foundation. Lacking Vedic sanction almost entirely, the practice of worshipping images may have grown up under the stimulus of Buddhism which, while it attacked Vedic sacrifices, in its later form, encouraged the idea that particular places and objects are holy, and countenanced the use of images. Worship in temples, however, never attained the importance in Hinduism that church services attained in Christianity. In later times, such worship came to be overlaid with many *tantric* forms, some of them debasing in character, and there has been present at all times a general feeling that worshipping in temples is not of the essence of the highest religion of the Hindus, and the *śrauta* has always taken a place below the *gṛhya* and the *śrotriya* in popular estimation.

It is on the secular side and as a social institution that the temple is seen to have filled in the past a considerable place in the economy of national life. Southern India is rich in its ancient temples, and the walls of these usually bear inscriptions of exceptional interest to the historian. The great temple of Tanjore, 'the best designed of all the great South Indian temples,' is unique in many ways. When it was built, it was, as doubtless it was meant to be, the largest structural temple in Southern India. It is, after nearly a thousand years, in a perfect state of preservation and has not, owing to a lucky chance, fallen a prey to the ravages of time and man. We know more about this temple than about any other single structure of its kind. The numerous inscriptions on its walls have been collected and, for the most part, published at arduous with admirable care and scholarship by Dr. Hultzsch and Mr. Venkayya in Volume II of the South Indian Inscriptions. With their aid we shall see what the world owes to the piety, and the thoughtfulness, and, it may be, the vanity, of perhaps the greatest of a long line of great kings, the Cōḷas.

'The Great Temple of Tanjore rose out of the imagination of its founder, from whom it took its name Rājarājēśvara.' There was no shrine of ancient renown on the spot, and Tanjore had no place in the orthodox list of Śaiva shrines celebrated in the *Devāram* by the early apostles of Śaivism in the Tamil country.[2]

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[1] The practice of naming shrines after their founders seems to have been borrowed from South India, and extensively employed in the Indo-Chinese Peninsula in ancient times.

[2] A popular legend explains this by the story that Appar, one of these saints, was refused admission into the temple (*Tanjore Gazetteer*, p. 271)

That the king was fully conscious of the grandeur of his achievement becomes clear from the proud terms of his order issued on the twentieth day[1] of the twenty-sixth year of his reign, from his palace at Tanjore, calling upon his officials "to engrave on the walls of the Śrī Vimāna of the stone-temple to Rājarājēśvara raised by us in Tanjāvūr, gifts by ourselves, by our elder sister, by our queens and by many others." With what thoroughness and minute attention to details this order was carried out in the reigns of Rājarāja and his equally illustrious son and successor Rājēndra is seen in the inscriptions themselves.

It was the boast of the Pallava king Mahēndra I (c. 600—30 A.D.) that he made temples without brick and mortar, timber or iron,[2]—by which he meant the 'cave-temples' of which he scooped out several in the South. That brick temples survived up to relatively late times is borne out by the Cōla inscriptions of the eleventh and twelfth centuries furnishing examples of such temples being rebuilt in stone.[3] But very soon after the time of Mahēndravarman I, much progress was effected in the art of constructing structural temples out of stone which, as Prof. Dubreuil points out,[4] must have been found more difficult in those days than hewing off solid blocks of granite into desired forms. The Rājasiṁhēśvara at Kāñcipuram and the shore temple at Mahābalipuram may be taken to provide a fair idea of the progress achieved in

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[1] *S.I.I.*, II, i. Mr. Venkayya has shown that this was the first record to be engraved on the upper tier of the Northern and Western walls of the *Vimāna* (*S.I.I.*, II, Introduction, p. 14), and that none of these inscriptions was actually engraved before the 29th year of Rājarāja.

[2] *Ep. Ind.*, XVII, p. 14.

[3] 173 of 1900.

[4] *Archéologie Ex Sud de l'Inde*, Tom. I, p. 31.

the planning and construction of structural temples out of stone nearly three centuries before Rājarāja came to the throne.

Bewildered by the size and complexity of latter-day temples dominated by the somewhat hidebound rules of a decadent *śilpaśāstra*, Fergusson remarked that in 'nine cases out of ten, Dravidian temples are a fortuitous aggregation of parts, arranged without plan, as accident dictated at the time of their erection,' and that 'the one great exception to this rule is to be found at Tanjore where the temple 'was commenced on a well-defined and stately plan, which was persevered in till its completion', and these remarks have often been quoted[1] with approval. Yet all that we know of temples and temple architecture before the tenth or even the thirteenth century belies these remarks. The temple of those times was generally a small and elegant structure surmounted by a *vimāna* standing in an open court-yard, with the minor shrines if any, disposed in convenient corners or in a row along covered verandahs inside the wall enclosing the court. Such structures do not seem to have lacked either plan or unity, and were anything but 'a fortuitous aggregation of parts'

At the time of its construction, the Tanjore temple was unique not so much for the greater definiteness of design or unity of plan which marked it off from other temples in existence, as for its over powering size, which no doubt gave rise to tremendous technical problems, solved only by a very lavish expenditure of resources in men and material. To have conceived a great temple in that proportion, to have insured by cautious designing that beauty was not sacrificed to size, and to have built

[1] See, e.g., *Tanjore Gazetteer*, p. 270.

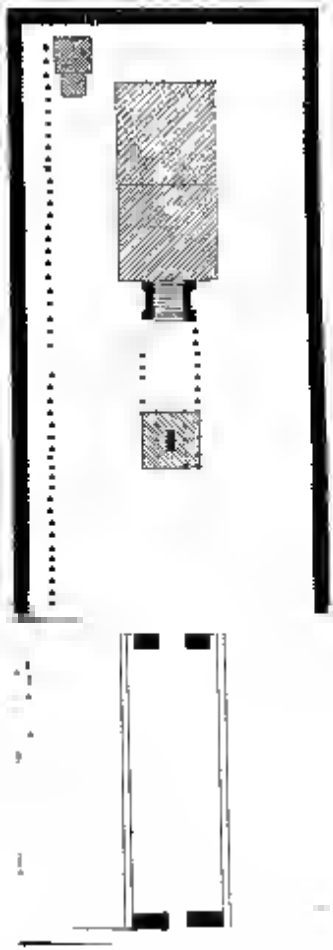

Diagram Plan of the Great Temple

it altogether of very fine granite from *nposa* to *stūpi* in a city far removed from any good quarry[1] of building stone, this is the glory of Rājarāja and his architects.

Of the details of construction we have no record. A grandson of the king, Rājendradeva, ordered nearly half a century later, about A.D. 1058, that a daily allowance of paddy was to be given from the treasury of the temple to a troop of actors who had to enact a drama, called *Rājarājeśvara-nāṭaka*, on the occasion of the *Vaikāśi* festival in the temple. It is conceivable that this *nāṭaka* was a popular presentation of scenes from the construction of the temple. Even now, during the festival in the month of *Vaikāśi* (May-June), a drama is enacted in the temple on a platform near the main (eastern) entrance into the courtyard of the temple, though the memory of Rājarājeśvara nāṭaka does not seem to have survived.

The hamlet Śārappallam (the scaffold-hollow), four miles from Tanjore, is said to take its name from the fact that the single block of granite on the top of the tower weighing 80 tons, was conveyed to its position up an inclined plane commencing from the village. We learn from the inscriptions only this, that a considerable part of the enclosing wall (*tirucceṟṟumaṇiccuvar*) of the temple was built under the supervision of a Brahmin military official Kuṟṟan Rāman by name.[2]

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[1] Actually the stones seem to have been brought from the quarries of Kannadai, eight miles S.E. of Trichinopoly, over a road of nearly thirty miles. (*Tanjore Gazetteer*, p. 271.)

[2] S. I. I., II, Nos. 31, 33 and 45. Mr. Venkayya (*Ibid.*, p. 13, *Introd.*) argues, rather inconclusively, that because this record is engraved twice on the South enclosure and once on the west enclosure 'we may conclude that these two enclosures were built at different times by the king's general.' He adds: 'There is no such inscription on any part of the north or

It was in the twenty-fifth year of his reign A.D. 1009–10, on the 275th day of the year, that the king handed over the copper-pot for the finial at the top of the *Vimāna*. It weighed about 235 lbs. and was overlaid with gold plate of the weight of 2926½ *kalanjus* or nearly 35 lbs. Troy. This is the only evidence we have on which to base our inferences about the time when the construction was finished. The length of time taken up in the construction, the quantity and nature of the labour employed, on these and other such subjects, our curiosity must apparently for ever remain unsatisfied. A careful inspection of some parts of the temple shows that much of the sculpture work must have been started after the dressed stones were got into position in the main structure, and if this surmise is correct, workmen must have been engaged in carrying out the scheme of ornamentation for a considerable time after the completion of the *Vimāna*, and this may well have been so. On the other hand, the inscription tells us

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east enclosure, and it is not impossible that they were built by the king himself.' It is strange that so experienced an epigraphist should have overlooked the express statement in the triplicate record of Kiṟṟaṉ Raṉaṉ that he built the enclosure to the order of the king—"*uḷaiyār śrī-Rājā-rāja divarkkuṟṟaṉ māḷigaiyuḷḷa*." I am also unable to follow Mr. Venkayya's speculations on Rājarāja's relation to the authorities of the temple at Cidambaram (*ibid.*, pp. 5 and 14). He thinks that the title Rājarāja and Śivapādaśekhara were conferred on him by the Cidambaram people, because "according to the *Koṅguḍaimaṇḍalam* the king made certain gifts to the Cidambaram temple in S. 926=A.D. 1004." Now the *Koṅguḍaimaṇḍalam* says that this king excelled Parāntaka in his gifts to Cidambaram, but gives no date for them; it also explains the title Rājā-rāja, not as '*kubera*,' the friend of Śiva, as Mr. Venkayya does, but as 'king of kings,' and distinctly says that this title was earned by his conquest of other kings.

D 1531—Details of the Tower over the Sanctum of the GREAT TEMPLE, Tanjore

that some gifts like fly-whisks, bugles and so on, were made to the temple from the king's treasury as early as the twenty third regnal year

There can be no question that the Great Temple of Tanjore impresses us most by the grandeur and complicity of the design, and the perfect style of its execution. The extensive court-yard enclosed within high stone walls is about 500 feet from east to west and is almost exactly half as broad. The towering *Vimāna*, which dominates the whole, rises near the western end of the court to a height of about 190 feet, and the square base that supports it measures almost exactly half this on its sides. The high basement provides for the entire structure and the simple but massive mouldings on its sides add to the imposing appearance of the whole composition, best appreciated from the southern side of the court-yard which is least encumbered by subsidiary structures Notable among such structures, and later in point of time, are the bald shrine to Dakṣiṇāmūrti with its ugly stair leading up to the image enshrined originally in one of the niches of the *Vimāna*—an inconsiderable addition to the towering mass of stone, but enough to spoil the view of its original symmetry, and the exquisite temple of Subrahmaṇya (to the north of the main temple) which has evoked much praise by the excellence and elaborateness of its ornamental patterns The small *mandapa* in front of the main temple and another sheltering the big monolithic *nandi* in front of it are also, doubtless, later additions. It cannot be said that any of these additions, the fine temple of Subrahmaṇya not excepted, has improved the appearance of the ancient structure The outer court of the temple, to the east of the one holding the main shrine, was used as an arsenal for a time by the French in 1772, and for about thirty years thereafter the English turned the temple into a camp. In 1901-02 the temple was purified and

reconsecrated by Raja Sarloji.[1] For all these vicissitudes, however,—and there were doubtless others of which we have no record—the temple has suffered remarkably little damage. The mutilation of a few of the numberless sculptures is nothing by the side of the ruin that has overtaken the younger temple of Gangaikonda-cōḷapuram. The Tanjore temple has been preserved on the whole very much as its founder left it,[2] which is not true in the same measure of any other South Indian temple. Even the fort and the ditch, much as these may have been altered in later times, formed part of the original design of Rājarāja, as Karuvūr-dēvar mentions them in his hymn (*Tiruvāyppāṭi*) on the Tanjore temple.

The Great Temple is even more remarkable for the simplicity and the elegance of its sculptures and ornamental designs, than for the majesty of its proportions. The tooling of the stone is so exquisitely delicate, that every detail, including the well-chiselled lettering of the inscriptions, stands out clear and sharp as on the day it left the sculptor's hands. An adequate study of the sculptures in this temple has not yet been made; but hasty opinions have been expressed that originally they were all Śaivite in character, and that the Vaiṣṇavite sculptures on the *Vimāna* and elsewhere must be considered later embellishments. The truth, however, is that, though himself an ardent devotee of Śiva, the king was not so sectarian as to exclude from the ornamentation on the walls of the Great Temple motifs drawn from the many beautiful Vaiṣṇava legends of the land. Scenes from the Buddha's life are

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[1] Fergusson, I, 366.

[2] The *Tanjore Gazetteer* (p. 270) records a popular story about the figure of a Dane on the northern side of the tower, and suggests, what is most unlikely, that the Nāyaks erected the Vaiṣṇavite figures on the *Vimāna*.

D.110—South-West View of Inner GOPURAM, THE GREAT TEMPLE, Tanjore

seen depicted on the outer (eastern) side of the parapet enclosing the broad flight of steps to the south of the temple. The art of the painter was not forgotten but the paintings, at least such as we have traces of, were tucked away under the *Vimāna* in a dark passage round the *garbhagṛha* where they were discovered very recently by the pluck of a young scholar and artist.[1] As things move in this distracted and unfortunate country, it will be long before these fine frescoes in bright colours, the most considerable set of Hindu paintings of any antiquity so far brought to light in South India, become available for general study and criticism in proper reproductions.

The inexorable law of imperialism requires that the conquered must pay for the luxuries of the conqueror. Athens adorned herself at the expense of her 'allies'; Tanjore was beautified by Rājarāja largely at the expense of the countries newly subjected to his sway. Among the numberless gifts of gold and precious stones made by the king to the temple, several are stated to have come from the treasures captured by him in his campaigns in the Malai nāḍ (hill-country) against the Cēra and the Pāṇḍyas, and some from the campaign against Satyāśraya, the Cāḷukya king of the West.[2] The richest gifts that were made to the temple were by the king himself, his elder sister Kundavai and his numerous queens. The amount of treasure lavished on the temple in the shape of vessels and utensils of gold and silver, and in the form of jewelled ornaments is very large, and as if to set at rest our scepticism in this regard, Rājarāja and his son took care to give a full and detailed account of each of the items, great and small, that made

[1] Mr. S. K. Govindaswami of the Annamalai University.

[2] *S. I. I.*, II, 1, paragraphs 54 and 62.

up the tale of their benefactions. No doubt, parts of this account are now lost to us, but what is left gives sufficient indication that the temple engrossed the mind of Rājarāja in the closing years of his life. By the twenty-ninth year of his reign, Rājarāja had perfected his arrangements for the endowment in perpetuity of the vast sums needed for the lavish routine of daily requirements in the great temple. He had presented, among other valuables, golden articles weighing 41,539 *kalanju*[1] or roughly 489 lbs. Troy, and jewels worth nearly 10,200 *kāśu*, equal to half as many *kalanju* in gold.[2] He had also given silverware of the total weight of 50,650 *kalanju*, nearly 600 lbs. Troy.[3] He had set apart lands in several villages throughout his extensive dominions, including Ceylon, yielding an annual income of 116,000 *kalam* of paddy, equal at prevailing prices to 58,000 *kāśu*, besides a cash income of 1,100 *kāśu*.

He had formed two long streets, the northern and the southern *Taḷicēri* running east to west, and inhabited by four hundred dancing women impressed from the other *Taḷicēri*s[4] in the Cōḷa country and provided each

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[1] A *Kalanju* was about 68 grains under Rājarāja—Codrington, *Ceylon Coins and Currency*, p. 5.

[2] *S. I. I.*, II, 58, paragraph 48 gives the information 15 manjādi=3/4 *pon*. A *pon* (*kalanju*) was equal to two *kāśu*. Codrington, *op. cit.*, *ibid*.

[3] It is by no means clear that silver was less in vogue than gold or precious stones. *Ibidem*, *S. I. I.* II, p. 416 (Introdn to No. 91.)

[4] *Taḷicēri* seems to mean 'street of the temple' so called either because it adjoined the temple, or more probably, it was inhabited by the servants (*aḷiyār*) of the temple. This list of women, who were transferred to Tanjore, is interesting in many ways. It gives a clear idea of the temples, Śiva and Viṣṇu, in existence at the time and the names of women are a fine study in themselves.

with one house and one *ēli* of land, vie'd at an annual return of 100 *kalam* of paddy called a *pangu* (share). About 180 such *pangus* (shares) had been set apart for the maintenance of no fewer than 212 male servants for the temple comprising dancing-masters, musicians, drummers, barbers, goldsmiths, tailors,[1] accountants and so on. Among these were three persons to sing the *Arayan* (Sanskrit?) and four others to sing the *Tamil*—terms which seem to imply that already the sacred hymns of the Tamil saints had received recognition as Dravida Vēdam and claimed equal rank with the original Vedas. The king's elder sister, Perumtaḷan Kundavai Āḷvār, as she is called in the inscriptions, gave gold of the weight of nearly 10,000 *Kalanju* and jewels and utensils of the value of about 14,000 *Kāsu*. Others, queens and high officials in the royal service, made other gifts, recorded with equal care and precision on the stone walls and pillars of the temple. When we recall the nature and extent of the efforts and sacrifices that must have gone to the construction of this magnificent temple, the number of servants and attendants dependent on it after it came up, the method by which these were recruited from the different parts of the Cōḷa kingdom and the precise rules laid down for the regular maintenance of their supply, and the manner in which numerous villages all over the empire were linked up with the daily routine of the temple by having to send supplies to it on account of lands held or as interest on sums borrowed from the temple at various times, when we consider, further, how all the learning and the arts that flourished in the country were impressed into the service of this temple, we cannot

[1] While the *Tayyān* of paragraphs 499-500 (S. I. I., II, 60) is a tailor, the *pagan* of 506-8 is not a 'tailor,' as Hultzsch understands it, but a singer, who not only sang but danced to his tune. Note the names of Pagans ending in *Ōkkan*

fail to observe how the Great Temple came to hold, from its very inception, a prominent place in the polity of the land. The temple was meant to dominate Tanjore, as Tanjore dominated the rest of South India at the time; it was, indeed, the masterpiece of Rājarāja's rule.

Much information can be gathered from the inscriptions about the economic conditions, the prices, wages and currency, prevailing at the time, the standards of measure and weight, and so on. The *kāśu*, equal to a half *kalañju* of gold, was the standard unit of currency, and the *akkam* was a coin which had a twelfth of the value[1] of the *Kāśu*. The 'lamp,' curiously enough, was often used as a unit of reckoning for minor endowments in temples and was the equivalent in value of 96 sheep, 48 cows or 16 buffaloes[2], the normal price of a sheep (*āḍu*) seems to have been a third of a *kāśu*,[3] though at times two *akkam* were counted as the equivalent of an *āḍu*.[4] Cardamum was sold at 12 measures per *kāśu*; and cus-cus at about 50 lbs. for the same amount of money.[5] It should be observed that these prices[6] must have been reached by some method of averaging or standardisation, as they are used for the regulation of perpetual endowments for services and supplies in the temple. Any doubt that such methods are too modern to have been practised so early must be set at rest by the fact that the device of adding a small sum to a large total for rounding the figure is clearly adopted in these inscriptions.[7]

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[1] *S.I.I.*, II, 6, para 15.
[2] *S.I.I.*, II, 63.
[3] *Ibid.*, 64.
[4] *Ibid.*, 95
[5] *Ibid.*, 24.
[6] *Ibid.*, 37
[7] The term used in this connection is 'ārram' *S.I.I.*, II, 6, para 14.

The lands of the temple were marked off from neighbouring lands by means of boundary stones bearing the mark of the presiding deity, *Śūlam* (trident) in the case of Śiva, and the *Cakra* (*ēli*) for Viṣṇu.[1]

This inadequate notice of a large subject may be brought to a close by some observations on the state of religious belief and practice of the time suggested by the inscriptions before us. The king was doubtless an ardent follower of the Śaiva religion. It is remarkable that South Indian Śaivism appears to have had, in those days, extensive connections with upper India. An inscription[2] of the nineteenth year of Rājēndra, the son of Rājarāja, records a magnificent gift of 2,000 *kalam* of paddy per annum to be shared among the *śiṣyas* and *prasiṣyas* of Śarva Śiva Paṇḍita the worshipping priest of the Tanjore temple, whether their places of residence were in the *Āryadēśa*, the *Madhyadēśa* or the *Gauḍadēśa*, and places the entire charity under the trusteeship of the Śaiva *ācāryas* of the family of Śarva Śiva. Among the arrangements made by Rājarāja for the service in the temple was provision for a choir of 48 persons with two drummers for the recitation of sacred hymns (*tirupadiyam uyyappaḍiyum*),[3] each man being remunerated at the rate of three *kuruni* (24 measures) of paddy per diem. They were constituted into a self-regulating corporation, and the king ordered that if anyone among them died or migrated, the nearest relative of that person was to take his place in the choir, or, if he was not competent to do so, he was to appoint some one who could do it (*vāriyan*); in case no such relatives were available, the

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[1] *Ibid.*, 61, para 6, and *S. I. I.*, I, 59.

[2] *S.I.I.*, II, 20.

[3] *Ibid.*, 65.

other members of the choir were to choose some suitable person for the vacancy. All the persons of the choir, including the drummer, bore aliases ending in Śiva and, no doubt, belonged to the class of Śivabrāhmaṇas so frequently mentioned in the Cōḷa records. Śaivaite though he was, Rājarāja was no narrow sectarian. He presented an image of Mahāviṣṇu to the temple[1] and admitted Vaiṣṇava and even Buddhist sculptures in the decoration of its *Vimāna* and basement. The larger Leyden grant furnishes clear proof of the friendly relations that subsisted between the king and the Buddhist monastery at Nagapaṭṭaṇa. There is much indirect evidence also in the hagiology of South Indian Vaiṣṇavism that the Vaiṣṇava divines of the period lived on friendly terms with the Cōḷa rulers, though occasional differences and disputes were not altogether unknown. Some Viṣṇu temples were also required to contribute their quota to make up the four hundred *taḷi-ceri-ppeṇḍugaḷ* (temple-women) settled in Tanjore in the vicinity of the temple. A study of the images presented to the temple and described in great detail, of the highest interest to the iconographist, confirms the general impression of prevailing eclecticism in matters religious.

An image of Ardhanārīśvara, one of Brahmā and one of Sūrya are mentioned among them. Lastly, the icons of Naṭarāja (*āḍa vallāṉ*), Patañjali, and of the Śaiva saints[2] including the three authors of the Dēvāram (*Tiruppadigaṅgaḷ*) imply that, on the whole, the age of Rājarāja was the heyday of the Śaiva revival in the south which reached its climax in the age of Śēkkiḻār.

K. A. NILAKANTA SASTRI.

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[1] *S.I.I.*, II, 52.

[2] The stories of Meypporuḷ-nāyaṉār and Śiṟuttoṇḍar are clearly implied by the icons detailed in *S.I.I.*, II, 40 and 43. See pages 19-20 and 39 of the Introduction to the volume by Venkayya.

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THE ANNUAL INCOME AND EXPENDITURE OF SHER SHAH'S KINGDOM

The historians of Sher Shah's time have not left any adequate account of his income or expenditure. Hence, though it is impossible to form anything like an accurate estimate of his finances, yet we have in the accounts of the rulers who preceded the king as also in those of the various heads of his own expenditure which can be roughly calculated, considerable material to make an approximate estimate in the matter.

His Income

Mr. Thomas in his 'Chronicles of the Pathan Kings of Delhi' has calculated the annual income of Firoz Tughlaq and Babar as follows[1] :—

	Silver Tanks or rupees	£ (at the rate of 3s = 1 rupee)
Firoz Shah (A.D. 1351—1388)	6,08,50,000	= 60,85,000
Babar (A.D. 1526—1530)	2,60,00,000	= 26,00,000

Let us now compare the extent of the kingdoms and incomes of these two rulers with those of Sher Shah. Firoz Shah had lost a large part of the Tughlaq Empire, his dominions having dwindled almost entirely to Northern India. The whole of the Deccan, Sind[2] and Bengal had become independent. Firoz levied only the four taxes prescribed by Islamic law. In addition to this he had also some income from his canals and gardens.

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[1] *Chronicles*, p. 445.

[2] Sind had been reconquered by Firoz.

The kingdom of Babar was far smaller. It included Bengal only for a short time, but Gujrat, Sind, and the major part of Rajputana and Central India were never brought within its bounds so as to yield any income. He had, however, Kabul and the neighbouring country under his rule, and that partly made up the deficiency But still his income was much less obviously because of the fact that Babar had never had the time or opportunity to settle the administration well The whole of the four years of his life in India was spent in conquering the land. Hence it was not possible for him to levy such taxes as might yield an adequate revenue.

It is not known at what rate Firoz charged his land rent, but having regard to his mildness of temperament, it may be surmised that he reduced the 50 per cent demand of his uncle Muhammad Tughlaq to 25 per cent But Sher Shah had several advantages over Firoz. For one thing, the personal equation of the two rulers naturally made a vast difference between their general efficiency and strength of administration Hence the collection of government dues under Firoz must have been rather lax and not without a good deal of corruption, whilst that of Sher Shah was so strict and punctual that evasions in payment or embezzlements were reduced to the minimum. Secondly, Sher Shah had established firm government over Gujrat, Sind, Bengal and other distant provinces which was far from being the case under Firoz. Then we know that Sher Shah charged one-third of the crop as land rent and had abolished all other taxes There is no mention of Jazia in his time; hence we may conclude that if it was allowed to continue at all, the incidence as also the collection thereof must have been so mild as to prevent all possibility of oppression. Consequently his income from this head could not have been very large. In view of the above survey we can make a comparison

between the revenue of Firoz and Sher Shah under the following heads:—

	Under Firoz	Under Sher Shah
1 Land revenue (Kharaj)	One-fourth of the crop.	One-third of the crop.
2 Zakat	These were raised by Firoz, but it is difficult to make even an approximate estimate thereof.	No mention, and in all probability abolished by Sher Shah.
3 Jazia		
4. Khums or booty from holy wars (Jehad)	Could not have been considerable as Firoz waged very few wars.	Although Sher Shah did not wage any wars of religion he must have yet got a great deal from wars.
5 Revenue from gardens and canals.	This was quite considerable.	Sher Shah did not charge any taxes on public works.
6. Octroi and tolls.	Firoz had probably abolished these.	Sher Shah charged an octroi and terminal tax only at two places on the frontiers.
7 .		Income from the Jagirs of the amirs and soldiers, which the state had resumed in consideration of cash payments.
8. . .		Income from the land attached to the *sarais*

On comparing these resources of Sher Shah and Firoz it would not be unjust to conclude that the former's income should have approximately been double that of the latter, that is to say, it should have been about 13 crores of rupees.

This estimate also seems to be correct when we compare it with Akbar's income. In the year 1539,

Akbar's entire income has been calculated to have been about 33 crores of rupees and in 1605 when two more provinces were added to his empire it came up to 35 crores[1]. The provinces of Kabul, Khandesh, Berar, Ahmadnagar Orissa and Kashmir which did not owe allegiance to Sher Shah, were included in Akbar's empire, that is to say, the extent of the latter's empire was nearly double that of the former. Moreover, under Akbar, in 1605, half a century of peaceful and well-established government had made the country very prosperous, he had, besides, introduced various other taxes which Sher Shah had not imposed. Thus these facts also warrant the estimate that Sher Shah's revenue should have been about two-fifths or somewhat less than half that of Akbar, i.e., about 13 crores.

Expenditure

We have seen how it is not possible to make anything like an exact estimate of Sher Shah's income. The same is the case about his expenditure.

For making a rough estimate in this connection we have two classes of facts to utilise. Firstly, the historians have on some occasions given definite figures of his expenditure. Secondly, we know the remaining heads of expenditure from which we can estimate it roughly.

The total expenditure of Sher Shah can be divided under four main heads :—

I. Civil Administration.
II. Army.
III. Public Works.
IV. The Emperor's person and the *harem*.

I. *Civil Administration*.—Within this department the following were broadly the sub-heads of expenditure:

[1] Thomas, *Chronicles of the Pathan Kings* p. 445.

(1) *The Central Government*—Sher Shah's administration was an example of the most centralised autocracy. He used to inspect and supervise every branch of administration personally. But there were a number of secretaries whose duty it was to present before him the daily business of the different departments, in order to receive his orders for the disposal thereof. Their number should have been about ten or twelve.

(2) The royal kitchen was another major item of expenditure. Several thousand horsemen, footsoldiers and attendants, servants, etc., as well as the needy and destitute used to board in the royal kitchen every day. He had issued a general order that 'if any soldier or religious personage, or any cultivator should be in need of food, he should be fed at the king's kitchen, and should not be allowed to famish. And places for the dispensing of food to the poor and the destitute and to all necessitous persons were established in the camp that they might feed every one as above described.' The daily cost in connection with this feeding amounted to 500 gold pieces (*Ashrafis*), *i.e.*, (182,500 Ashrafis per year).[1] Now the *Ashrafi* of Sher Shah was nearly one tola in weight and the ratio between the price of gold and silver, as calculated by Edward Thomas, was 9½ : 1,[2] and the silver *tanka* or the rupee weighed also a tola. Thus in terms of rupees the daily expenses of his kitchen would have amounted to nearly Rs. 5,000 or 18,25,000 rupees annually. The value of money at that time was nearly thirteen times as much as at present.[3] Calculated on this basis the expenditure on the royal kitchen which was

[1] Elliot, IV, 423.
[2] *Chronicles of the Pathan Kings*, p. 405.
[3] Brij Narain's *Indian Economic Life*, p. 21.

meant to feed the needy and the destitute would amount to as much as Rs. 2,37,25,000 of the present day.

(3) As in Moghul times, there must have been under Sher Shah also numerous royal factories for supplying dresses and the necessary equipments to the army and other functionaries of the state, but unfortunately no mention of them is so far known. These must also have formed a considerable item of expenditure.

(4) If we accept the territorial divisions of Akbar's time to have been based on the preceding ones, the kingdom of Sher Shah should have comprised about ninety sarkars and 2,500 parganas. Thus there would have been about 100 chief shikdars and 100 chief amils in the sarkars in addition to about a thousand subordinates, clerks, etc., in their offices. Then in the 2,500 parganas the number of the various officials and the servants must have been as follows:—

2,500 Shikdars 2,500 Amins or Amils
5,000 Karkuns 2,500 Fotadars,

besides these, there were several thousand patwaris, qanungos, peons, bailiffs and various lower servants of the departments. In addition to this expenditure the government had to pay a certain allowance to the *muhaddams* or headmen of each village in consideration of their help in the collection of revenue. The number of villages being computed at 113,000, allowances must have been paid to at least as many *muhaddams*. In the time of Jahangir the rates of worker's wages were as follows:—Wages of the servants of the royal camp varied from Rs. 3 to 10 per month, i.e., Rs. 39 to 130 of the present time. The peons got Rs. 3-8, i.e., Rs. 45 of the present time. The sweeper got Rs. 5 and the ordinary servant Rs. 4-8, i.e., Rs. 65 and 58 respectively of the present day.[1] If we assume about the same ratio

between the salaries of peons, *patwaris* and *qanungos* as obtains at the present time the salaries of these and higher officials may have been roughly as follows:—

Peon Rs. 3-8; Patwaris Rs. 8 to 15, Qanungo Rs. 20 to 30; Karkuns Rs. 15 to 20, Fotadars Rs. 20 to 25, Amils and Shikdars Rs. 50 to 100 and Chief Shikdars and Amils Rs. 200 each on an average. Multiplied by 13 these figures will approximately give us an idea of the rates of salaries in terms of the present value of money. Thus the monthly expenditure on the administrative staff may be estimated to have been as follows:—

Shikdars	= 2500 × 75 = Rs.	1,87,500
Amils	= 2500 × 75 = Rs.	1,87,500
Chief Shikdars and Amils	= 90 × 2 × 200 = Rs.	36,000
Karkuns	= 5000 × 20 = Rs.	1,00,000
Fotadars	= 2500 × 20 = Rs.	50,000
Therefore the total yearly salaries	= Rs.	5,61,000

There were, besides, members of the subordinate staff, whose salaries are not included in the above calculations.

(5) *The Judiciary.*—The number of sarkars and parganas has been estimated to have been approximately 90 and 2,500 respectively. Assuming two Qazis for each pargana and one Chief Qazi for each sarkar there should have been 5,000 Qazis and 90 Chief Qazis.

The expenditure on the salaries of the judiciary would have been per month:—

5000 × 100 = Rs. 5,00,000
90 × 200 = Rs. 18,000

Rs. 5,18,000 × 12 yearly

(6) *Dak or Postal Department.*—The expenditure on this item must have been considerable. To each *sarai* a dak chowkie was attached in which a pair of good horses was kept for carrying *dak*. Thus 3,400 horses of the best

quality were maintained in the 1,700 *sarais* that he had built, and at least as many grooms to tend them.[1] Assuming the groom's wages to be Rs. 2 or 2-8 per month and the expense per horse to be another Rs. 2 per mensem, the total expenditure on dak would amount to $3400 \times 8 + 2 \times 3400, 4$ s., Rs. 1,53,000 or Rs. 18,36,000 yearly.

(7) *Spies.*—Spies were attached to each army as well as to the persons of important officials. If we assume five spies to the pargana there would have been about 12,000 spies in the government employ. Their salaries could not have been less than about Rs. 20 to 25 per head. Thus the total expense on the espionage would amount to roughly Rs. 2,50,000 per mensem.

(8) *Police.*—Sher Shah's police appears to have been mostly local but it is certain that there were high officials in the pargana and sarkar to supervise the police work and to enforce the laws of the state. It is not possible, however, to strike even an approximate estimate of the expenses on this department.

II *The Army.*—The strength of the army was as follows[2].—

	Cavalry	Infantry	Elephants
With the king	150,000	25,000	5,000
Distributed in the cantonments	50,000	50,000	Nil

In addition to this Sher Shah had a considerable artillery also, but of this again it is not possible to form even a workable estimate. The above was the strength of the regular or standing army. But because Sher Shah was engaged almost in constant warfare he had to recruit

[1] Elliot, IV, p. 550.

[2] It is not possible in a short paper to give full data for these calculations. The reader can get them in my forthcoming book *Sher Shah and His Times*.

temporary soldiers very frequently, whose number must have been very large. The heavy expenses of unceasing wars and expeditions added to the regular expenses of the army constituted another big channel of expenditure.

III. *Public Works*.—The mileage of Sher Shah's trunk roads as mentioned by Abbas Sarwani and in the Waqiat-i-Mushtaqi comes to nearly 3,500. Briefly speaking the following were the heads of expenditure under this department.

(1) 3,500 miles of roads, cost of constructing and maintaining them, as also of planting fruit trees on both sides of them.

(2) 1,700 *sarais* containing wells, mosques, *dak chowkies*, royal guest houses, and inspection houses, etc., cost of building and maintaining them.

(3) The regular expenses of the *sarais*, which consisted of (*a*) food to all travellers and their cattle, free of charge, (*b*) salaries of one Shikdar, cooks, Bhatiārīs, water-carriers, ration-supplies, clerks, etc., employed for the management of each *serai*.

(4) Gifts to the *Imams* for maintaining mosques and connected schools.

(5) Gifts and presents to learned men, scholars, poets and others.

(6) Charity houses for the poor and needy which he opened in all cities.[1]

(7) *Khalat-khanas* opened in every city.

All these works would have entailed a considerable expenditure but it is difficult to make an estimate of the amount thus spent.

IV. Sher Shah had one more big item of expenditure. He had a deep regard for all Afghan noblemen, who came

[1] Elliot, IV, 349.

to India from their homes. He granted them rich jagirs and cash and thus made them wealthy and prosperous. Sher Shah incurred no expenses on the harem worth consideration. He was too busy with his ambitious schemes and too religious in private life to exceed the legal limit of wives allowed by the Shariyat.

Thus we see that though it is impossible to calculate even approximately the total annual expenditure of Sher Shah's Government, we may at any rate form a rough idea of how vast and varied it was.

PARAMATMA ŚARAN

RISE OF FASCISM

"This epoch after the war is a new epoch, and new epoch calls for new behaviours."

—*Mussolini.*

Italy's Great Past.

In the history of Europe Italy has played a very prominent part politically, legally, culturally and religiously. Some of the master-minds and men of action arose there and played their part in moulding the history of the world. The Roman Republic and the Roman Empire with its great generals, administrators and warriors, its poets, orators and prose-writers, its jurisconsults and law-givers, and with its personalities like Scipio and Caesar, Sulla and Cicero; Virgil, Horace and Tacitus, Gaius and Justinian, Marcus and Constantine adorn its past.

Christianity and its early fathers, the supreme pontiffs and popes of the Roman Catholic Church like Gregory VII, Innocent III and Boniface VIII, monks like St. Francis of Assisi, poets and philosophers like Dante and St. Thomas of Aquino, political writers like Marsiglio, Machiavelli and Vico, artists like Raphael, Leonardo and Michael Angelo; humanists like Petrarch and Boccacio, martyrs like Savonarola and Giordano Bruno, city-states like those of Florence and Venice, scientists like Copernicus and Galileo, explorers like Columbo and Amerigo Vespucci, travellers like Marco Polo and Manucci; educationists like Vittorino Da Feltre, revolutionaries like Mazzini and Garibaldi, statesmen like Cavour and Victor Emanuel, have all moulded the country's history and the people's mind.

She had a great past and is ambitious to create a great future.

Her Ambitions

The traditions of the Roman Empire and Papal supremacy still haunt her dreams. The nineteenth century achievements of her unity and her liberation during the Risorgimento have strengthened her domineering tendencies which are present in those traditions, have made for her success in the Great War and to-day have revived them again.

Her Internal Weakness

It was the misfortune of Italy that, though her history has always been creative throughout, she was during the Middle Ages and later split up into a large number of independent duchies, kingdoms and cities warring against one another, and had become a prey to foreign intrigues, influences and encroachments. Consequently during the period of the Geographical Revolution in Europe or the Age of Discovery she was not united and strong enough to take a share in the acquisitions of the new world. Her internal conflicts and problems stopped her growth and deteriorated the character of her people. Neither Machiavelli's politics nor Napoleon's regime could help her out of her difficulties. It was Mazzini's message of unity and liberation, the advancing tide of nationalism and the atrocities of hated foreigners that woke her up and it was the work of Cavour, Garibaldi and Victor Emanuel that liberated her and gave her confidence and unity.

After the wars of the Risorgimento (1871), the problems which faced her were those of internal consolidation and progress and of international position and equality. But besides these there was one problem more to the

heart of the Italians, namely, the question of Italia Irredenta—the Italian territories still lying under foreign yoke.

But unfortunately the race of great men which adorned her fair name during her period of liberation and unity seemed to be extinct, and ordinary types of administrators and statesmen guided her destinies during the last 50 years. They could not solve her domestic problems nor satisfy her international ambition nor liberate Italia Irredenta

Before the outbreak of the Great War she had not shown any strength nor got any opportunity in finding her true place in the European polity and the welt-politik.

New Forces.

Meanwhile, new forces had come to influence her mind Socialist movement had made its way amongst the people. The revived imperial ambition was making her throw her eyes and hands on Africa and hate Turkey. The recurrent national ambition of securing Italia Irredenta was agitating her mind and making her hatred of Austria unbalkable and increasing, because of the latter's designs and encroachments on the Adriatic coastal territories

Such was the past history and the recurrent feeling in Italy when a new set of dictators—the Fascists—arose to fulfil her ambitions and to finish her unsolved problems.

Factors in European History during the last 30 years.

History viewed as a science tells us that there is no effect without cause. The past thirty years have been a dissolving period of history One picture fades from view—the picture of faith in Parliamentarism and Private property. The new one has not yet come into force, though, no doubt, new social institutions and new moral

ideas are shaping themselves under the influence of, but as a protest against, the old. A new spirit of human relations is abroad in the world, though the strength of old forms and ideas has not yet weakened to-day. The ferment of this age is no doubt partly due to world communication and a widening faith in the idea of world unity and humanity. But we must not satisfy ourselves by stating this world tendency but find out the more important features and the general drift of Italy's history.

The new dynamic agency which arose in Italy was that of the new Industrialism and the consequent struggle for bread, as the old one was that of Imperialism and the struggle for power both internal and international. Since the last decade of the 19th century both these agencies are working either in cooperation or conflict and, in their struggle, have become world wide in interest and are affecting the destinies of millions in adverse ways. Between economic interests and groups and political ambitions and forces there has been set up a struggle for supremacy. In the same nation these conflicts have taken a reformatory or revolutionary shape. Thus there is a conflict of these forces within the world for supremacy and there is a similar conflict within the nation, and there is also a conflict against the nation for class or human interests.

At the close of the middle ages religion had become subordinated to politics which became the principal agency of new activities and theories. So now politics—nation-politics and empire-politics—has become in Europe the basis of social and political stability, and economics assumes the rôle of social and political irritant—the principle of activity in modern life. The rationalistic attitude of the Platonic past is now supplanted by the idea and force of Rousseauan will to power and will to live

and therefore the democratic principle of self-assertion self-help, self-association and self-government has spread to economic groups and functions. This has necessitated the development in organisation of parties and principles with characteristic military and missionary attitude and practice. This dance of new ideas has spread over the world, destroying vested interests and natural or national, political and economic rights

To-day there is from this point of view a world-economics and a world-politics as there was in the past the old nation-economics and nation-politics.

1789 and 1889 compared.

The spirit of the year 1789 was the regeneration of mankind through political agencies—the rights of man, the sovereignty of the people—by assuring them liberty, property, security and resistance to oppression; and nationalism was its keynote of reform The spirit of 1889 is the regeneration of mankind through economic agencies—bread and leisure to the worker—by assuring him minima of life or equal wage and a high or equal standard of material living against the oppression of the rich bourgeoisie, and internationalism is its keynote of reform. The purpose of society is not purely political but also economic. Therefore the rise of trusts, cartels, combines, cooperative societies, trade unions, syndicates, federations, is the order of the day State must look after the economic interests of all equally or it must be subordinated or has no right to exist and must go, if it works in the interest of a few Therefore new institutions become necessary for a new state of mind and a new ethical code Old political institutions are not adequate to meet the needs of changing times when the growth of industrialism and an industrial class have created new problems and new conflicts

To-day this philosophy seems to have permeated the entire fabric of Western society. We shall have to study its dictates and observe its drama on the Italian soil before we can understand the force and ferocity of Fascism.

Lack of Great Men in Italy and its Consequences.

After the efforts of Risorgimento, the liberation and union of Italy in 1870 and the passing away of the direct influence of her four great giants the destinies of the Rome of Caesars and the Rome of Popes fell into the hands of second-rate men. From 1872 to 1922 the period was one of drift and uncertainty. For 30 years (1870—1900) Italians looked in vain for the prosperity which her patriots had promised them. The stirring days of willing suffering had passed away and domestic problems emerged when the external conflicts ceased. They were economic, social, financial, ecclesiastical and political ones. Ministries of Dupretis, Crispi and Giolitti were not able to do much. Agrarian and labour disturbances were put down with iron hand. Taxation became heavy and its incidence unjust. Gaping deficits increased the national debt. There was an heritage of 350 years of misrule and oppression to be lived down. Political corruption got fastened on the machine of Government. After the fall of the Right, the transformism of Dupretis (1876-87) believed in buying votes of this or that group. Therefore the Chamber became the home of an unscrupulous opportunism. Crispi (1887—1893) and (1893—1898) did not refrain from tampering with voters' lists and using bribery and corruption at elections. Thus the internal politics and politicians were of a mediocre type and Parliamentarism was not truly developed. Therefore popular discontent gave and prepared a fertile soil wherein the seeds of Socialism rapidly germinated disturbing all ideas of authority and discipline.

In 1898 there were ominous indications of a social upheaval and widespread disorder. The people were in great misery. Wheaten bread was a luxury due to high tariffs and bad harvests. Half-starved labourers gathered and shouted for bread and work. Riots took place, but were remorselessly put down. Consequently socialist and revolutionary clubs and labour strikes increased.

A Change in 1900—Home Policy

Since 1901 after the accession of Victor Emmanuel III with his motto "trust the people" a new departure was made in the policy by Zanardelli-Giolitti ministry and a favourable attitude was adopted towards labour, and attention was paid towards political liberty and social reform. For example, Employer's Liability Act, Factory Acts, Old Age Pensions Act, Abolition of Octroi duties on bread and flour products were passed, and working class organised itself. But there was a general strike in 1904, which paralysed civic life largely. It however failed as a whole. The result was that Catholics who had refrained from voting since 1874 and had boycotted political life since 1861 on the principle of "ne eletti, ne elettori," now participated in elections according to the Pope's encyclical "Il Fermo Proposito (1905)," being afraid of the rising anarchy of Radicals, Republicans and Socialists. The old anarchic temper however continued. Italian unity had been a cheap success and political machine remained corrupted. This fact undermined faith in Parliamentary institutions.

Foreign Policy and Ambition

As regards her foreign policy, Italy had failed at Berlin (1878) to secure her proper frontiers or get any territorial advantages on the African soil. She had cherished a protectorate over Tunis. She was lured by grandiose

visions of a vast Italian Empire in Erythraea and Lybia and was anxious to get back Italia Irredenta in Trentino, Trieste, and the little Venetian towns on the Dalmatian coasts—Istria Corfu, Fiume—which were Italian in character, language and history

Their redemption was now the chief plank of the Republican platform

Her Grudge against France Remained

France occupied Tunis in 1881 in spite of Italy's public opinion, and England Egypt in 1882, nor did she get any territorial compensation.

During the partition of Africa in 1884-85 she commenced her forward policy in Abyssinia and though severely defeated at Adowa in 1896, she did not give up her African dream In 1900 however she had to abandon her suzerainty over Abyssinia

Austria was occupying her unredeemed provinces and continued to be her enemy as in the past. This Irrendentist feeling remained however only a sullen undercurrent during this period. More important were the tariff wars between France and Italy in 1886 and onwards. The consequence was the renewal of a Triple Alliance between Germany, Austria and Italy. In 1898 tariff wars ended, and France admitted Italy's claims over Tripoli.

Italy succeeded in her African ambitions by getting possession of Tripoli by a wanton attack upon Turkey in 1912. But till the outbreak of the Great War her Irrendentist ambitions had no opportunity of fulfilment.

Rise of Socialist Movement.

Militant socialist party in Italy arose on the ruins of the Mazzinian idealists and was pledged to fight solely for the material welfare of the workers. It was much influenced in its earlier stages with the anarchism of

Bakounin and the French communards. Italian socialism became however definitely Marxian and less revolutionary in the early eighties under the leadership of Andrea Costa and Filippo Turati. The best of the young intellectuals and artisans joined it, because it was the only living creed which created hope in the suffering people. It gradually extended its influence over the peasants by accepting the co-operative movement in 1896. Crispi however persecuted the socialists savagely.

Split: Anarchists and Reformists

Socialist theories were unknown in Italy in 1871. A few French communists came after the suppression of the commune in Paris in 1871. The new ideas were set forth in the programme of the second International approved in London in 1876. Bakounin was the philosopher of the new theory of anarchism. Garibaldi's Republican comrades in large numbers accepted it. But differences between the followers of Marx and Bakounin arose in Italy also. Anarchists were the idealists and worshipper of liberty and constitutional socialists under Andrea Costa accepted the Parliamentary Reform system, advocated social reforms, adopted cooperation between different classes up to a certain point and believed in the education of the proletariat class for economic emancipation. Anarchists continued to hope for an armed revolt of the masses against every form of government. The more practical Parliamentary socialists devoted themselves to the organization of the working classes. Trade unions and socialist sections increased in numbers and influenced and urged more and more reforms through their representatives in Parliament. They had to struggle hard to make the masses accept its eminently materialistic point of view. They had to combat the political idealism created by the republicans and maintained by materialists

and the spirit of indiscipline of the people as a whole. Socialism, however, could not eradicate completely Italians' deep love for their native land. The republican party after Mazzini's death had kept up an anti-Austrian propaganda and an obstinate Irredentism all along. Mazzini had said, "Think of them ever and speak of them never."

Political Parties in Italy.

Thus Italy was divided into three political parties—(1) the Right, that is, the conservatives who worked and fought for the Risorgimento, (2) the Left, that is liberals and radicals, and (3) the Extreme Left, that is the republicans and socialists. The Left came into power in 1876 after the fall of Minghetti and continued to rule throughout. It carried out extension of franchise, compulsory and free education, freedom of the press and other reforms. The socialists criticised and opposed all existing order, though they adopted Parliament as their weapon of reform. Two camps arose in this party in 1893. The *Riformisti* accepted monarchy and cooperation with other classes for definite measures of reform by a policy of participating in the government of the country. The Intransigenti, who repudiated the anarchistic theory of violence were rigid and exclusive Marxists who continued to preach the class struggle and the necessity of a radical transformation of the social organism and would not cooperate with any capitalist society. A third section arose at the Congress of Rome in 1900 under Labriola called *Sindicalists* who emphasized the fundamental revolutionary character of socialism and advocated "direct action" of the organised workers. These socialist movements shaped the unleavened masses to life and action, economic and political.

Strength of the Parliamentary Socialist Party

But the Parliamentary or evolutionary party still dominated the workers. They monopolised the labour movement and were strongest in the industrial north. They adopted general strike as a final weapon in their struggles in 1906 but it was not to be used frequently or excessively. They had not as yet turned Red Revolutionaries or Syndicalists.

Nationalist Party: Its Aims

As a counterpoise to socialists there was a group of energetic youngmen—poets, journalists and thinkers (D'Annunzio, Benedetto Croce, Alfredo Oriani, Enrico Corradini) who were inspired by the Risorgimento ideals and filled with a burning desire to free their country from the crude materialism of socialists and as Luigi Villari says "the cynical scepticism of the pusillanimous bourgeois politicians." They favoured a strong foreign policy with a rigid national policy, and did not shrink from challenging the principles of democracy. They created the virile nationalist movement and became a political party.

Italy's Pre-War Finances and Administration

We must notice one more point about pre-war Italy, namely, her finances and administration. The story of Italian financial position was one of increasing burden of expenditure on railways, army, navy, etc., borne by a country poor in natural resources and young in the practice of industry. All the surpluses since 1900 were absorbed in them. Her national debt was consequently large and increasing. Then there was corruption in the public service and its purification had become necessary. There was also a lack of efficient and honest administrators. In 1910 Thomas Ockey wrote: "Italy still awaits the courageous and resolute reformer who will grapple

with the shameless corruption which is so exhausting a drain on the national resources."

On the Eve of War.

The war wrought a great change in Italy There were two parties—those who were opposed to intervention and wanted to be neutral, and those were for it. The Vatican and Catholics who feared Russia, disliked atheistic France and believed in clerical Austria, and the advanced socialists who were only for class-warfare, opposed the war and were defeatists. The reformists, socialists, Irredentists, nationalists, Imperialists, a section of the liberals and the masses were for war, and entertained great hopes out of the successes of war when achieved.

Germany's Penetration into Italy

Besides the fact of her Triple Alliance, Germany had penetrated economically into Italy and therefore, the vested interests and conservative sections were opposed to intervention for business reasons But the desire to gain unredeemed provinces and Austria's reluctance to accommodate it increased the feeling in favour of war Austria refused Trentino and the Allies promised all in the Pact of London (1915)

Entry into War

In May 1915, Salandra's Government repudiated the Triple Alliance and joined in the war

At the Peace Conference—Italy's Failure in Her Ambitions—Consequences of Peace—Bolshevik Feeling—Weakness of Government

At the Peace Conference in 1919 Italy's claims on the Adriatic were opposed by President Wilson. She did not get all she wanted but she got only Trentino and South Tyrol. People got annoyed but the government

could not do anything. D'Annunzio took forcible possession of Fiume, but the delicate question was settled only by the Treaty of Rapallo (1920) between Italy and Jugo-Slavia, and the unredeemed provinces were recovered. Moreover, peace did not bring the fulfilment of her great expectations, economic and imperial. The rise of prices and the increase of unemployment and consequent misery created profound discontent in the masses. They turned their eyes towards Russia. In 1919 and 1920 they came very near Bolshevism. Strikes began in quick succession for an increase in wages to keep pace with ever-increasing prices. Postal and Railway strikes of 1920 assumed political character. Signor Nitti's government temporised and tried to buy off strikers by concessions and amnesties. This led to the weakening of the government position and the inevitability of Bolshevism. There was budget deficit of 14 milliard lires. Nitti resigned in 1920. Giolitti succeeded. He stopped the bread subsidy. But difficulties did not cease.

Post-war Difficulties

Italy's post-war difficulties were largely due to her want of raw materials—coal, iron, cotton—indispensable to her industry. Emigration used to provide an outlet for her surplus population. But war arrested her emigration, disordered her commerce and diminished her supplies of every kind. France acquired at the Peace Conference a very large territory and quantity of raw material, but Italy failed to secure any economic advantage. The unredeemed provinces became a burden. She felt herself ill-treated and her government by its irresolute policy failed to make at the Peace Conference the most of her great sacrifices during the war. She was to get only ten per cent of reparations. Her war-debt had amounted to 114 milliards lires, and she found it impossible to pay her debts or even its interest.

Bolshevik Highhanded Acts.

Government's weakness was the outstanding feature of this post-war period. It only watched the industrial crisis. In 1920 the occupation of factories by communist workers took place Originally it was a movement of resistance by the great Metallurgical Trade Union to a threatened lockout by the employers in the engineering factories of Milan, but it spread rapidly through Lombardy, Piedmont and even to other parts of Italy In some workshops arms were stored and the red flag flown, but the authorities sent no troops against the men. The movement however collapsed for want of proper organized methods and leaders, after having committed a number of tyrannies. Giolitti was blamed for not providing police protection for the factories Some of them were seriously damaged. Bad treatment of soldiers of war however exasperated the nationalist feelings because they were hunted down like criminals and murdered with impunity by Bolshevists

Weakness of Socialists.

Bad reports about Russian conditions were however brought by socialist delegates Socialist party consequently split and there was an end to all hopes of a Red Revolution. A definite tendency towards reaction became prominent.

Rising Tide of Nationalists against Socialists Mussolini's Early Career His Early Views

A new nationalist movement set in to counteract the promises of the Reds and the Popolari who were Christian democrats under Don Sturzo (1919) and wanted to capture and control various groups as against the state Revolutions are always minority movements The patriotic parties in the Chamber formed an alliance to which they gave the name of Fascio Parlamentare. The name then spread

to certain groups in the country which were formed to check the ever-increasing lawlessness and economic chaos, and the weakness of the existing government to suppress them. This name was adopted finally by Mussolini—a leader of remarkable antecedents and strong personal power who organized the first of his Fasci di Combattimento in March 1919. He was a socialist, an editor of a socialist paper, a friend of the people and a republican. He is the son of a blacksmith of Romagna. He was born in 1883, went to Switzerland and was educated as an elementary school teacher, and practised the school teacher's profession for several years. He studied social and economic sciences. He became a socialist and an editor of a stirring revolutionary paper, carried on agitation, was imprisoned and expelled from Switzerland and Austria. He returned to Italy, and carried on socialist campaign and became one of its greatest exponents. He edited at one time the official organ of the socialist party "The Avanti." He with his syndicalist leanings took part in the revolutionary outbreak known as the Red Days of 1914, which was a union of anarchists, syndicalists and republicans in an attempt at an armed revolt. Mussolini belonged to the left or revolutionary wing of socialists. Bissolati's group was the right wing which was nationalist. Turati's group was the moderate wing or the centre.

Favours Intervention.

In 1914 he joined the War. It converted him to the policy of intervention. He left "Avanti" and started 'Popolo d'Italia' and called for intervention. Thus socialists were weakened because they lost both the right and the left wing. They wanted to be neutral in war because their position and policy was international. Bissolati's group agreed to cooperate with the existing state when its national sentiment was roused. Mussolini's

revolutionary group regarded the war as a great revolutionary event and took a definite part in it. Consequently only mediocrities were left in the centre party. A hatred and opposition arose between neutralists and interventionists. The neutralists did not take advantage of war which would have taught heroism and sacrifice to classes struggling to be free.

His Gradual Conversion—His Foremost Desire

Mussolini's conversion to war and imperial nationalism made him an object of detestation to his former socialist comrades who opposed intervention to the bitter end. Mussolini volunteered himself for active service against Austria and was badly wounded, and returned He fought in his new paper 'Popolo d'Italia' against the anti-war party, class hatred and the subversionism of socialists. The key to his career therefore seems to be his intense inborn patriotism. He wanted the liberation of Italy He cared for the safety, strength and future of his patria.

After the war a large class of Italians felt Italy to be deserted by the Allies who had caused her ruin and poverty without giving any recompense. The resulting economic disorganisation and psychological upheaval led younger men into insurrectionary socialism They were attracted towards the Russian revolution, having felt enamoured of the Soviets or councils of soldiers, workmen and peasants. Thus the socialist strength arose The war party was discredited But the socialist party had no strong leaders and did not take advantage of its opportunities. It wasted its time in complete inaction. This led to discontent in the party. In 1920 they decided to act, but the masses were not used to struggle or sacrifice and they would not seize power by force. They depended on strikes or industrial action.

They captured factories and were satisfied. No struggle was made to seize political power. Hence Bolshevism ended after a few skirmishes and casualties.

Reaction against Socialists—A Counter-Movement.

On the contrary the anti-socialist movement against Red Leagues grew in strength. Revolt against them spread in 1921. Mutual threats, reprisals and murders took place. But socialists retreated and showed no strength or heroism in the fight.

Socialists Defeated in a Civil War by Fascists.

Fascists who opposed and fought them were reared in Revolutionary Trade Unionism called Syndicalists, and had taken full part in the hardship of war and were used to aggression and struggle.

Fascists, Their Origin and Growth.

Fasces mean a bundle of rods enclosing an axe. They were the Roman symbol of authority carried by the lictors before higher magistrates. Fascios were armed squads of young nationalists who wore black shirts. On March 23, 1919, at Milan, Mussolini arranged a meeting of Interventionists (150) which was known as their constituent assembly. Its aim and objects were to use and to secure the fruits of victory, to establish a Republic and a strong government, to abolish the senate to introduce universal suffrage and proportional representation.

Their Aim.

Its immediate object however was to put a check on the subversive agitation of communists and their methods of violence. They hated the governmental weakness, uncertainty and hesitation. They could not tolerate the condition of Italy as developed after the war. Bolshevik propagandists under the weak policy and toleration of

Nitti endeavoured to embitter the soul of the people by their savage class hatred Then there was a diplomatic defeat at Versailles. Communist's terrorism in the country was indulging in murder, boycott, and burning at pleasure without any governmental check or punishment. Nitti and Giolitti proved very weak ministers. Assassinations of Fascists, Sonzini and Giordani, took place in broad daylight. Law and government were practically non-existent

Their Methods—Their Strength—Mussolini, Their Leader

The Fascist groups which were created by Mussolini in 1919 arose as one man against this in self-defence and fought the excesses of communists at Bologna, Venice and elsewhere with violence matched to violence. They made regular reprisals. They said, "they take up axe and rod when the law-abiding get the worst of it, and law-breakers are immune" They thus defeated Bolshevism in a regular civil war They were joined by ex-soldiers, adventurers, generals of great fame, citizens weary of Red tyranny and of state cowardice, students, bands of troops, officials in active service, employees, professors, and compact groups of labourers in fields and factories, persons of every party, profession and creed A weak government led to the strengthening of the movement of the Fascists. For two years socialists had terrorised the nation. Bonomi's ministry also proved weak. Mussolini had in the meanwhile gathered round himself all the patriotic forces which were dissatisfied with the feeble post-war government which was incapable of facing sedition boldly and of solving post war problems The ideals of the early fascists were a sort of patriotic socialism directed against war profiteers, industrialists and communist-strikers and town-councillors Mussolini hovered between socialism and nationalism but the course of events turned

him towards the latter. He and his associates behaved in swifter methods than those of ordinary law which was so weakly administered. They entered Parliament in the election of 1921, but were small in numbers.

March on Rome

On October 28, 1922, he planned the famous and triumphant march on Rome, and people welcomed him and the king entrusted him with the task of government. When asked about his policy he said "he wanted to realise the full value of Italy's sacrifice in War."

Causes of the Weakness of the Existing Government

The general weakness of the Italian state was due to

(1) the want of a strong conservative party, because old kingdoms and old nobility were destroyed;
(2) the waywardness of middle classes,
(3) the control of politics by liberal, democratic bourgeoisie and socialist working classes who had not produced a man of the Cavour type who could show that strong government or order and liberty can be made to progress together.

Therefore Italy had drifted since 1870 and after the war there was a growing weakness or paralysis of the Central government. This gave a chance to Mussolini's party. Bonomi had followed Giolitti, and Facta followed Bonomi but there was no strength in any government. Mussolini had already accepted alliance with the bourgeoisie and capitalist classes. From 1921 he acted in consonance with the wishes of the nationalist party. His followers had increased in numbers. They had the war spirit in them and were disciplined. They routed the communists in the countryside and this new self-created militia fought in the name of order and discipline and

created, as it were, a 'new state' within the state. They destroyed the socialist monopoly of local government, and put themselves in their places. The government could have stopped these aggressions or highhanded acts of Fascists if it were itself strong enough. Fascists were desirous of seizing the state. They tried to ally themselves with trade-unionists and socialists and to stop acts of violence by the Pact of Pacification in 1921. But they did not succeed.

Against Parliamentary Form of Government

At this stage the ministry was weakened for want of support from Parliamentary parties Therefore the Parliament's prestige also got weakened. In 1922 a ministerial crisis occurred. King refused to sanction martial law to check the growth of Fascist power The ministry resigned. No new government could be formed. Socialists and Fascists were against the parliamentary system of government. The opportunity came to Mussolini He marched on Rome. The king welcomed the Black Shirts and handed over the government to their charge with Mussolini as the Prime Minister They based their government not on coalition but on the strength of their party alone which was then in a minority, forming only one-fourth of the electorate.

Mussolini Accepts Monarchy

Mussolini who was a month before a Republican now carried on the Government in the name of the monarchy which he accepted. The Fascist revolution was complete Strong men rose to power, and government became efficient and introduced order and peace in the country

Parliamentary System of Government Not Properly Developed.

It seems that the Parliamentary system of government has not been tended carefully in Italy. The corruption

of parties and party leaders did not allow a good impression and influence of its virtues to be created. Perhaps the Italian temper had not become accustomed to it. The advent of socialism, one of whose sections being totally anti parliamentary, and the Great War did not allow it to take root. In Italy which was recently emancipated from the servitude of centuries where force ruled over ignorance, internecine intrigue and strife, true independent minds and progressive wills were very few. People cared for private interests. Parliamentary elections were fought not on public but on personal interests. Hence respect for parliamentary methods was weak.

Mussolini Does Not Believe in the Old Parliamentary System

Mussolini as a Socialist did not believe in it, and now as one in possession of power based on the strength and support of his party and himself as a believer in certain definite principles would not tolerate it. He suppressed all hostile criticism even by violence. Parliamentary forms were either abrogated or kept as merely nominal.

His Utterances.

He said,

"In internal politics there is nothing to discuss, what is happening is happening by my precise and direct will and under my orders for which naturally I assume full responsibility."

"We have not formed the national militia for nothing. If the forces of opposition spread we shall set up execution squads in the Piazzas of Italy."

"In Russia and in Italy it has been proved that it is possible to govern outside, above, and against all liberal ideology . . Let it be realised, then, once for all, that Fascism recognises no

> idols, adores no fetishes. It has already passed and, if necessary, it will turn again, and pass once more over the more or less decomposed body of the goddess of liberty"

He seems to us like a Mahdi preaching a holy war for the recovery of Italy from the hands of the communists and liberal infidels. To him democracy would merely be the substitution of incompetent many for the corrupt few.

His Good Work.

But his tenure of power has transformed all the country. He has restored order and crushed communist danger with the help of his Fascist militia. The financial position has been improved and a deficit of 6000 million lires has been eliminated in four years and a surplus of 1400 million lires is created. He has simplified the taxes and distributed them more equitably. He has cut down all useless expenditure. Administration is now reformed and efficient.

His Economic Policy.

His new economic policy has been a collaboration of all classes and productive forces of the country for common good. There is to be no class warfare. A citizen is for the whole state and is a part of it. Labour disputes are compulsorily referred to special labour courts. Strikes and lockouts are declared illegal. The condition of labour is improved in wages and status.

His Foreign Policy.

In his foreign policy he has adopted a strong attitude in compelling respect for Italy and her claims. He is Mazzinian in his ardent nationalism. Italy is his ideal and his deity. In his methods he is Machiavellian. He is uncompromising in the employment of the means that

are needful to his great end. He is a realist a real politiker, a machtpolitiker and a weltpolitiker.

Results of His Drastic Methods

His drastic methods in bringing about various material improvements have caused discontent among vested interests, pacifists, humanitarians, socialists and parliamentarians, and also among the incompetent who are dismissed or pensioned off in his ruthless economy. He wants to make Italy great " by all means, in all places, and against everybody "

He has introduced moral and religious, aesthetical and practical ideas in education, which was before purely rational, under the direction of the philosopher Giovani Gentile.

His Condoning of the Highhanded Acts of His Party

In June 1924, the murder of a prominent socialist Matteotti by the Fascists began to make the outside world acquainted with the extent of their violent and unlawful methods used against their opponents Mussolini did not condemn but condoned the murder and the murderers were practically acquitted

New Election Law—His Monopoly of Power.

During the first eighteen months of his government he included in his cabinet Liberals, Catholics and Radicals. And there was a talk of a possible understanding with Socialists. And generally Salandra, Orlando, Giolitti (Liberals or Democrats) at first gave him support. But the elections of 1924 under a new law gave him three-fourths of seats in the Parliament. Hence his party monopolised the government in all ways. Because of his tampering with the legislative machinery, and of the Matteotti murder, the Liberals went over into opposition.

For example, Benedito Croce, the philosopher, and Guglielmo Ferrero, the historian disapproved all his high-handed acts.

His Extremism and Despotic Measures.

Thus abandoned by moderates he threw himself into the hands of the Fascist extremists, and was completely Fascistised in 1925. Liberty and liberalism then perished. The Press is now controlled by officers. Judges are made to obey the orders of Government, otherwise they are dismissed Teachers and professors cannot remain outside or be above party politics They must preach Fascism. There is very little liberty of speech, meeting and association The Fascists hold the monopoly of meetings, congresses, and processions Opponents are liable to be imprisoned if even disrespectful words are spoken

Parliamentary Government Does Not Function

Parliament really does not function There are hardly any free elections or any electoral principle. Opposition members are all expelled from legislatures. Consequently there is a lack of informed opposition and hence the rise of corruption and bureaucracy. All communes or towns are governed by a Podesta nominated by the Central power Old municipal or administrative councils have been done away with. There is now heavy taxation but no representation.

Measures Against Socialists

He has abolished strikes, boycotts and sabotage, dissolved Trade Unions, suppressed Party organs, arrested their leaders and burnt their headquarters, and compelled all to cooperate and work for nation

Even in his own party, elections have been abolished. He nominates the general secretary of the party who is

turn nominates the provincial secretaries, and they in turn nominate the secretaries of single Fascios. The followers do not count. As a political being the citizen has ceased to exist.

Material Security and Prosperity.

On the contrary, there is security and material prosperity. Public works have been developed, budget has been balanced, and war debts have been settled. Mussolini himself is above suspicion, selfishness and corruption. He is intensely active and hardly tired.

Peoples' Trust.

It seems that the people trust him. Every government depends on the wishes, spirit and wisdom of the active people. Constitution has been in abeyance and legislation has placed all control in the hands of the executive government which means in his hands.

Democracy at Stake

He is not anti-capitalist and his may be termed the Black dictatorship as against the Red dictatorship. The eternal question of democracy or self-government in politics and economics is at stake, while Mussolini imposes his ideas of good government and brings about some good conditions of order and material prosperity. In the 'Italia nuova,' the Goddess of liberty is dethroned and the work of Mazzini is lost.

Forces Behind Him

He is the child of Italy's unfulfilled national ambitions, ambitions which were created by Mazzini and inspired by the Rome of Cæsars and Rome of Popes. As a nationalist he wants all the Italian lands to be free and Italy to be united, as an Imperialist he wants a Colonial Empire and Mediterranean supremacy, as a

nationalist-socialist he wants the material happiness of the workers and disappearance of the German bourgeoisie from land who held in grips her economic life and wealth, and the harmony of the classes. He means well. Italy is an overcrowded country of forty millions as compared with France, and the population increases at the rate of half a million annually. She possesses few colonies. America is closing her doors against Italian immigrants. Economically she lacks coal, iron, chemicals and advanced chemical and technical knowledge. His desire is therefore of 'Italia nuova' and a greater Italy at home and abroad. His guiding motive seems to be not the actual benefits or liberties of individuals but the promotion of power and greatness of the state. Thiers has said about 18th Brumaire, "when after a long apathy, men reawaken and attach themselves to something, C'est avec passion."

Conclusion.

It is really a conflict between normal and abnormal duties and times. How long the latter are to last depends on the wishes, wisdom and spirit of the people. Free people may abhor them, forced nations may detest them, but stagnant and weakened peoples may welcome temporarily the ethics of dictatorship as against the ethics of democracy.

Aims and Policy of the Fascism

It is very difficult to state what part of the Fascist's mentality and methods is transitional and what part national and universal. On the whole to-day the aims and policy of Fascism may be stated to be as follows:

1. Its intense patriotism. It refuses to endanger the life and material welfare of the people by pursuing theoretical ideals. It believes only in one party. Socialist

and Liberal parties are suppressed. There is to be no compromise with them.

2. Its hatred of class warfare. Its national outlook and belief in cooperation between all classes in economic production. It opposes class and international socialism. It believes in individualistic notions of private property.

Fascism rejects the theory of popular sovereignty and sets up in its place that of the sovereignty of the state.

3. Its faith in strong government, in authority and obedience, in violence against violence, and in the discipline and dictatorship of its own leader. It rejects any sorts of pacifism, or pacifism. It believes in a complete revision of the whole liberal-democratic theory of Parliamentary government. Their equality theory, universal franchise, electoral contests and elections are rejected. The strong, the best, and the wisest are to be put at the head of the government. There is no theory of ministerial responsibility. Parliament is only to discuss, approve and legislate. It can have no administrative function.

4. It welcomes political, commercial, financial and industrial intercourse with the world but it would not allow foreign control of Italy's economic life in any way.

5. It wants to guard fully her international rights and colonial needs and ambitions.

6. It does not advocate state proprietorship of land; it believes in a progressive proprietorship of land on the part of the cultivators. State is to bring this about. The cultivators are to be given technical, administrative and financial help. Land is to be allotted to those who work it. The law of succession is to be reformed.

7. Its recognition of state supremacy. Society does not exist for the individual but the individual for the state. Right of the individual is not superior to the state. State is to control, adjust, and decide about all group activities, whether capitalist's corporations or labour syndicates.

Peoples' will is free so long as what they wish is for the common good. It does not believe in the natural rights of man or in liberty divorced from law and end. It affirms that rights of man arise from his consciousness of duty.

"The nation is the God-appointed instrument for the welfare of the race and in this alone its moral essence lies," says Mussolini.

S. V. PUNTAMBEKAR.

THE INDIAN FEDERAL CONSTITUTION

The Indian Federal Constitution is generally regarded as one of the surprises of the Round Table Conference, but those, who were privileged to have a view behind the scenes, knew that the ground for it had been carefully prepared both in Simla and London. The Simon Commission had devoted one of its exhaustive chapters to a consideration of the question and supplied some of the useful details which were later embodied in the London proposals. Only it could not come to a definite conclusion as the subject was outside its terms of reference and it had no opportunity of examining the Princes in order to determine whether the idea of federation was capable of immediate realisation or was only a distant possibility. It nevertheless hinted at the direction in which it wished the future constitution of India to move by recommending the reorganisation of the Legislative Assembly on a federal rather than a unitary basis and requesting the Prime Minister to invite the Princes' participation in the Round Table Conference. The ideas so thrown out were taken up by the Princes who had been greatly disappointed by the Butler Committee's Report regarding their rights and status. It may be said without exaggeration that the main outlines of the scheme were formulated by the Maharaja of Bikaner in consultation with Pandit Malaviya at Simla. The clever publicity officers connected with the Princes' Chambers' Special Organisation had already a book on Indian Federation in the press and nearly every prince had a scheme before any of the delegates of the Round Table Conference had left the shores of India. The rest of the business consisted in a skilful endeavour, which proved successful, to persuade the British Indian delegates to sacrifice their

cherished unitary conception in favour of federation and to convince the British Delegation that it was the only way out of an impossible situation which appeared to leave no alternative between government by repression and concession of responsibility at the centre.

A Diplomatic Gathering

The Round Table Conference was therefore more a gathering of diplomats than a constituent assembly. It was convened to enlist the cooperation of those who had kept aloof from the Simon Commission and to decide political questions of path and moment rather than hammer out constitutional details. In the game of diplomatic finesse which thus ensued, the British Indians were no match for the seasoned veterans of the British Government and those distinguished Indian statesmen who had spent their lives in the atmosphere of Indian States. Divided as they were by every principle which separates one human being from another, by ambition, jealousy, political sentiment, communal rivalry, social and economic animosity, they were outclassed and outwitted everywhere. Lacking the expert advice and the skilled technical assistance which the Princes and the British delegates commanded and the precision of mind, which only a carefully thought-out scheme can give, and swayed by every gust of counsel and political passion in India, they yielded ground everywhere and fell an easy prey into the net carefully prepared for them. They made concession after concession and called them acts of practical statesmanship. They had set out to attain communal unity, but brought back only discord and disunity. They aimed at full Parliamentary central responsibility but lost the Legislative Assembly. They sought freedom from bureaucrats but found only fresh masters in the Princes. They tried for Dominion Status but brought back responsibility encumbered with so many

safeguards as to be almost in chains They attained federation but in their hurry dropped Burma on the way

Motives for Federation

Nevertheless Indian Federation is one of the distinctive achievements of the Conference which could not have been obtained by any other method The vision of a United India appeals to the heart and imagination of every Indian, and if the Round Table Conference had done nothing else but to make this vision a reality, it would have deserved a place in history But the translation of the idea of Federation into practice was accompanied by such serious sacrifices in detail and principle that it made thoughtful observers view it with some amount of suspicion This is clear from the different motives from which different parties welcomed Federation. The Labour Government seized on it as an excellent pretext for getting the unfortunate Simon Commission Report out of the way. The Conservative and Liberal parties welcomed it as a stabilising factor in Indian politics They knew more than any one else that Federation and Responsibility do not go well together. The Princes and their astute advisors after their recent disappointment with the expensive advocacy of Sir Leslie Scott and the conclusions of the Butler Report saw in it their only practical chance of defining and rationalising Paramountcy Indeed it is they who had fathered the idea and its acceptance by the Conference is one of the most notable achievements in the annals of diplomacy for which the credit should go to the Maharaja of Bikaner, the Nizam, the Nawab of Bhopal and the Maharaja of Mysore and their responsible advisors. The Muslims in the first instance hailed Federation as an additional support to their pet theory of residual powers for the provinces. The only class of persons who viewed it with misgivings were the Hindu Liberals. They

were not clear how their cherished convictions regarding unitary responsible government, democracy and residual powers for the central government would fare in the new scheme, but they were ultimately carried off their feet by the eloquent advocacy of Sir Tej Bahadur Sapru and the imperative necessity of presenting a "united front." The Right Honourable Srinivasa Sastri expressed his opposition to the last, but the great master of English diction and the hero of many platform triumphs was entangled in the web of legal subtlety, constitutional intricacy and political expediency which was skilfully woven round him, and when in spite of what he had written a few days before in an Indian newspaper, he announced his conversion in the open Conference, the battle of Federation was won. The rest was an easy task. It was left to Mr Ramsay MacDonald and Lord Sankey to guide the deliberations in a predetermined channel. This was rendered easier by the fact that most of the British Indian delegates—great authorities on diarchy, separate electorates and central responsibility—who might have been expected to give trouble, had no clear conception of what Federation meant and were content to receive their guidance on this obscure subject from the various schemes drafted by the Princes and their secretaries which made their appearance at this psychological moment, supplemented by the unwritten wisdom of the Lord Chancellor. The few who had, were so overwhelmed by British hospitality, the inclemency of the English weather and the polite compliments of the Chairman of the Federal Structure Sub-Committee and so handicapped by the want of secretarial assistance that they were content to drift along to the appointed haven. Meanwhile there was incessant telegraphing between Whitehall and Simla and a feverish activity behind the scenes not unlike that which attends the preparation of a throne-room scene in an Indian drama while the audience

is regaled with comic songs and impromptu dances. The British delegates went on pouring their sympathy for the delectation of Indian audiences, the Indian delegates continued to dazzle the British public with their forensic eloquence, while lighter entertainment was provided by the Popular Press in the shape of stories of fierce tigers and beautiful Ranis. Meanwhile the Prime Minister with the quiet assistance of experts from India like Sir Malcolm Hailey, Sir Charles Innes and others from the India Office prepared his famous concluding speech, which, according to his son's showing, was ready before Sir Tej Bahadur Sapru and Lord Reading had delivered their "epoch-making" utterances. The result of these deliberations open or secret is the provisional federal proposals embodying the conclusions of His Majesty's Government on the Indian Constitutional question.

Details of Federation.

The main features of the Federal scheme as it emerged out of the skilful hands of the Federal Structure Sub-Committee are that the Federation is to consist of British Provinces on the one hand and Indian States or groups of states as may enter the Federation on the other. The Federal Legislature is to consist of two Chambers, each containing representatives of both British India and the States. The powers of the Federal Legislature have been determined by classifying all subjects in Schedule (1) of the Government of India Act, 1919, into exclusively Federal, exclusively Provincial and subjects in which both the Centre and the Provinces are interested and which might therefore be classed as provincial, subjects to Federal Legislation. Besides these there are subjects like the Army and Foreign Affairs etc., which are reserved for the Crown. Of these four categories of subjects, the Federal Legislature has the power to legislate or lay

down policy for the first two. They include most of the subjects which are assigned to the Federal Government in other countries and comprise a surprisingly large number. There is thus no reason to fear that the future Federation of India will be handicapped by any serious limitations on its powers. This happy result is due to the commendable spirit of give and take shown by the Princes and is one of the creditable results of the Conference. To provide for the adequate representation of all interests the size of the Upper Chamber, called the Senate, has been fixed at from 100 to 150, while that of the Lower Chamber has been fixed at 250. The principle of conceding weightage to the States in the distribution of seats in the Upper Chamber has been accepted while a similar claim in the case of the Lower Chamber has been left over for subsequent discussion. The Crown has also put forward the claim for filling some seats by nomination to safeguard the interest of the subjects exclusively reserved to it. The Princes reserve to themselves the right to make their own arrangements for filling the seats assigned to them while the British Government will fill its share by election by the Provincial Councils by the method of the single transferable vote for the Upper Chamber and by direct or indirect popular election for the Lower Chamber. While the franchise for the Upper Chamber is to be the same as for the present Council of State, the franchise for the Lower Chamber will necessarily depend upon the method of election adopted.

The Organisation of the Executive.

The organisation of the Federal Executive and its relation to the Legislature is really the heart of the Indian Constitutional problem. It therefore excited the keenest interest and conflict of opinion. Subject to difference on details and on the question of safeguards, it has been

agreed that the Federal Executive should consist of the Viceroy assisted by a Federal Ministry recruited from and jointly responsible to both the Houses except for one or two official ministers in charge of reserved subjects who will be responsible to the Viceroy alone. They will resign with every ministry but shall be eligible for re-appointment. In order to ensure greater stability for the Executive than is generally found in Parliamentary countries, it is agreed that it should resign on an adverse vote, only if it is carried by a two-thirds majority. In addition to ordinary constitutional powers, the Viceroy is to have special powers of interference in cases of emergency or serious breakdown of administration, he has also to safeguard national credit and the administration of reserved subjects like the Army, Foreign Affairs and relations with Indian States, control the Currency Policy of the country until a Reserve Bank can be set up and protect Religions and Commerce against discrimination.

Criticism of These Proposals.

It is no criticism against these proposals for Federation and the attendant safeguards that there are no precedents for them in the existing or past constitution of any country. India has its special problems which are not found anywhere and must solve them in its special way. But while every allowance has been made for this factor, there is no denying the fact that the proposals are extraordinary and unprecedented and it behoves us to inquire whether they are all devised in the interests of India and whether they were not prompted by some special interests which do not appear on the surface. In this connection the question of motives with which the different parties agreed to accept Federation becomes important. There is no doubt that every provision in this Constitution can be explained in the light of these motives.

A Stable Legislature

The British Government wished to go as far as possible in the direction of pleasing India without alarming conservative vested interests at home. It therefore decided to give all the forms of Dominion Self-Government without conceding the substance in some essential respects. Hence its lip service to equality and self-determination and simultaneous insistence on a comprehensive list of Safeguards. It wished to appear to concede Dominion Status and at the same time retain control over essential subjects such as the Army, Foreign Affairs, Currency, Public Debt, Military Budget, Civil Services, Minorities, and European Commerce. In combining these contradictory aims, it achieved under the forms of Dominion Self Government Egyptian or even something less than Egyptian Status, i.e., internal autonomy subject to external control in essential questions. In the sphere of Central Government it conceded responsible Government hedged with such restrictions as to make it almost illusory. The first step taken was to abolish the radical Legislative Assembly which, with its direct election under a unitary Constitution and its irresponsible majority, had proved to be extremely inconvenient and to reorganize it on a Federal basis. Responsibility to such an Assembly on any other basis would have been extremely dangerous. The second step taken was to stabilize the constitution of the Central Legislature by introducing the princely element with a weightage in its favour. This suited the Princes extremely well who though anxious to limit paramountcy were not enthusiastic about Democracy either in their own dominions or in British India. They proposed to attain their end by surrendering certain common subjects, over which they had already lost control, to the Federal authority in which they demanded

excessive representation and at the same time retaining their sphere of internal Sovereignty inviolate against all encroachment by the Political Department. Thus at one stroke they hoped to put a limit to paramountcy and recover their lost power over subjects of common concern. At the same time most of them had no desire to introduce representative institutions in their states and even reserved the right to determine in their own way the method of their representation in the Federal Chambers. With these safeguards they decided to support the British Indian demand for Responsible Government and Dominion Status. Occupying the strategic position they did, they were thus able to pose as a stabilizing factor in the Indian Constitution before the British Government and as a patriotic and liberal influence before the British Indian Public. They were thus able to get support for their claims for favoured treatment from both sides. The Mussalmans tried to play the same game but their leadership was so tactless and unimaginative and their mule like insistence on their Fourteen Points was so selfish that they rapidly lost the sympathy of all parties and really fell between two stools. The British Delegation, on the other hand, was only too ready to use them as pawns in their game and no doubt counted upon them along with other special interests as another stabilising factor in the constitution of the Federal Legislature. The Crown nominees provided a third element of stability while indirect election was the fourth factor operating in the same direction.

An Irremovable Executive.

An Executive 'responsible' to a Legislature so constituted becomes irremovable and becomes really responsible to the Viceroy who appoints it. Instances of such irremovable 'responsible' ministries are not

unknown to the present Diarchical provincial constitutions. Under similar conditions, the same results may be repeated in what is to all intents and purposes a Diarchy in the Central Government. But there are in the Federation proposals additional safeguards. It has been proposed that ministries should not ordinarily resign unless a vote of no-confidence has been carried by a *two-thirds majority of both Houses sitting together*. A ministry may therefore be able to carry on if it can retain the confidence of one-third of the members of both the Chambers containing a large number of Viceregal and Princely nominees and representatives of special interests elected on a narrow franchise. It is a well known constitutional maxim that in Federations Responsible Government if established is generally weak. The fact that in the peculiar conditions of India, it will be the Viceroy's duty to look after the Army, Foreign Affairs, and a major portion of the finance himself and to provide for the adequate representation of Indian States and minorities in his executive and to attend to the protection of minorities, the public services, European commerce and the safety and tranquillity of the country will add enormously to his power and correspondingly weaken the sense of responsibility of his ministry. Responsibility with such safeguards is responsibility in chains and it would have been far better if British Indian Delegates had dispensed with it altogether and pressed for elected Executive on the Swiss or the American model. A fetish has been made of the theory of Responsible Government in India but it is doubtful if it is really suitable for the country. It will not work in a Federation and will in the long run mean a weak Executive.

The Value of Safeguards

Too much need not be made of the Safeguards. Some of them are indeed valuable provided they are in the

interest of India itself. For instance, it will be advisable to remove Currency and Railways from the influence of party politics altogether, provided care is taken to see that in removing State control a purely European control is not substituted. Unfortunately, freedom from the State means in too many cases in India merely control by a particular community. When this can be avoided management by a public corporation under rules made by the State is always better than direct management by the State. This is in accordance with the recent developments in political theory. Outside control over credit is not a safeguard in Indian interests. It will only weaken the sense of responsibility of Indian Ministers. Where there is no power to take risks there is really no responsibility and the restraint which responsibility imposes disappears.

Loss of British Indian Unity

The defects mentioned above can be rectified in course of time. For instance, the two-thirds provision for a motion of non-confidence may be dropped, the Princes may be induced to give the right of election to their subjects and the safeguards may be withdrawn. The main thing is to get a start where the form is present life will flow in sooner or later. But there is one thing, which if not rectified at the outset, will be past recall. In the anxiety to secure an all India unity, the units of British India achieved after a century's effort, seems in danger of being lost. There are many matters of common concern to the British Provinces, for instance, University education, Scientific research, Agricultural co-operation, Industrial organization, Irrigation, which have been coordinated from a single centre and may continue to be coordinated in the future also. While the present Central Machinery is being absorbed in the future Federal Organization, no separate machinery is being set up to perform these British Indian functions. Is it necessary

to destroy the existing structure in order to build a palace? The Federal Structure Committee was alive to the existence of these functions but left them to be performed by the Federal Government. Thus anomaly is created in so far that while British Indians will have no voice in the affairs of the Indian States, the States through their representatives in the Federal Legislature will control purely British Indian matters. The Princes propose to meet this difficulty by walking out when British Indian affairs are being discussed. This is impractical, as they can not walk out when a ministry is being censured on a purely British Indian issue. The anomaly and the inconvenience of this "walk in and walk out arrangement" is recognised by the Federal Structure Sub-committee but they preferred to put up with this anomaly rather than set up separate machinery for the settlement of common British Indian affairs. They give no reasons for this attitude, probably they thought that such matters will be too few to engage a separate organization. That, however, is not the experience of Prussia where there are vigorous Prussian institutions in addition to those existing for the provinces and the whole Germany. It would have been perhaps better if the component elements of Federation would have been British India on the one hand and the Indian States on the other instead of the British Provinces and the Indian States. But a marked prejudice against the unity of British India was a notable feature of the Conference and this was curiously strengthened by the attitude of the Princes and the Mussalman theory of the residuel powers for the provinces. The British Indian Delegation seems to have taken no adequate steps to prevent this disintegration of British India into rival and competing provincial units which threatens to add one more principle of division to those already existing in this country.

Lions in the Path

Edgar Allen Poe in one of his tales of mystery and imagination describes how Death ultimately joined a party of revellers in spite of all attempts to keep it out. While sharing the feast of Federation, the delegates of the Round Table Conference were uneasily conscious of two skeletons in the cupboard: the movements represented by Mahatma Gandhi and Moulana Shaukat Ali though they tried to keep them out as much as possible. Nevertheless these skeletons, if a man of generous proportions of Moulana Shaukat Ali can be called a skeleton, like Poe's Death entered and marred the tone of general festivity. The communal problem long postponed proved to be insoluble because of the wrong method of approach which was adopted and the Conference dispersed in an atmosphere of communal mutterings which were voiced loudly enough to be heard by all by Jinnah and other Mussalman delegates. That muttering has been echoed in the Communal Riots in the U P and it remains to be seen how long the Scheme of Federation will be able to survive the Communal Storm. Sir Muhmad Iqbal has roundly accused Federation as a Hindu device to rule over the Mussalman minority. However exaggerated this verdict may be, there is no doubt that for the successful working of the scheme a communal solution is indispensable. The criticism of the scheme is that while providing for all vested interests, it has failed to meet the forces which have been let loose by Mahatma Gandhi's movement. The masses are no longer in a "state of pathetic contentment" which the Montagu Chelmsford Report described 14 years ago. They are conscious of their poverty and led by the unemployed intelligentsia are also conscious of the political and economic measures by which it may be mitigated. The Conservative Scheme of the Round Table Conference fails to satisfy their aims and aspirations and will have to

be largely modified before they agree to work it. It must nevertheless be admitted that it marks a notable advance on the present Indian conditions and those who worked hard at great personal sacrifice to bring it about deserve the thanks of the country. Rome was not built in a day and every advance made serves only to point the path for further progress.

30th April, 1931 H. R. BATHEJA

THE POSITION OF INDIAN STATES IN THE NEW CONSTITUTION

I

The problem of the States has been with us from the beginning of Indian history. In order to escape extinction at the hands of a powerful monarch they accepted his suzerainty. The extent of subordination and the amount of control exercised by the Paramount Power have varied from time to time and with individual States. But never before was the control exercised in such a systematic and thoroughgoing fashion as during the last hundred years or so. The British Government gradually perfected a system of minute supervision, interference and control in the States through Political Agents and the machinery of the Political Department. The Princes were powerless before the working of this machine. They worried and fretted, they even wrote letters of protest, but they were unable to alter the situation. The change, however came by itself. The growth of the national movement in British India and the demand for self-governing institutions therein made the British look to the Indian Princes for help. Successive Viceroys, from Lord Lytton onwards, elaborated schemes for rallying them to their support. This policy reached an important stage in the time of Lord Minto, who, as pointed out by the Directorate of the Chamber's Special Organisation in 'The British Crown and the Indian States,' was alarmed at "the growth of the national movement in British India," and who "saw in the Princes a strong bulwark against subversive movements." From this time dates the policy of consulting Indian Princes on questions of common interest and of allowing them to meet together for

purposes of discussion leading ultimately to the formation of the Chamber of Princes in 1921. Gradually the theory of direct relations with the Crown was evolved and an attempt was made to use the States as a permanent block in the way of Indian progress towards Dominion Status.

But when the Princes began to meet together and to realise the advantageous situation in which the march of events had placed them they decided to use the opportunity to better their own position. They had three chief grievances—(1) They had no voice in deciding questions which affected them equally with British India, (2) there was no limit to the interference of the Paramount Power in the affairs of the States, and (3) there was no impartial tribunal to adjudicate claims between them and the Government of India—which was really judge in its own case. These grievances were placed by an influential deputation of the Princes before Mr Montagu when he toured India after the announcement of August 20, 1917. The Montagu-Chelmsford Report tried to remedy the situation by creating a Permanent Council (Chamber) of Princes, by associating a small Standing Committee of the Chamber with the work of the Political Department, and by making a provision for the appointment of impartial committees of enquiry in cases of disputes.

The Princes were not satisfied with the working of the new machinery recommended by the Montagu Chelmsford Report. Moreover, they were nervous of their future position in view of the developments that were taking place in British India. They were afraid that the establishment of responsible government in British India will prejudicially affect them and their whole Order. They began to discuss plans to safeguard their position and they have spared no pains and no money during the last five years to achieve their object. They have carried

on a vigorous propaganda in Britain and in India and even in foreign countries like America, they have employed able and expensive lawyers like Sir Leslie Scott to prepare and argue their case; and they have maintained a special organization consisting of the various types of experts to prepare all kinds of schemes to safeguard their position. And they have succeeded in making the Indian States question one of the foremost political problems of the day and in creating British public opinion in their favour

II

The first thing the Princes did was to secure the appointment of the Butler Committee on December 16, 1927 They had four main objects in view at the time.—(1) To set at rest their apprehension that the establishment of responsible government in British India will prejudicially affect their position, powers and dignity and to secure a guarantee from the Paramount Power for the protection, preservation and perpetuation of their Order; (2) to establish direct relations with the Crown and to avoid direct relations with the Government and people of British India when responsible government is established therein, (3) to secure codification of the practices of the Political Department and the limitation of the rights and powers of the Paramount Power, and (4) to obtain a share of the revenues derived by the Government of India from such all-India items as customs, railways, posts, telegraphs, salt, excise, etc. The verdict of the Butler Committee was favourable to the Princes on three points. It held that the relations of the States were with the Crown and not the Government of British India and that they were not to be transferred to any new government without the voluntary consent of the Princes, and that the States had a right to a share in

the Indian revenues the amount of which was to be determined by an expert committee to be appointed for the purpose. But on the fourth point—that the rights of the Crown were limited by the terms of the contracts (Treaties) made by the States with it and that the claim of the Crown to general interference in the affairs of the States is unconstitutional and tyrannical—the decision of the Butler Committee was against the Princes. It rejected their whole case and reasserted in a still more thoroughgoing fashion than ever before the doctrine of Paramountcy. It summed up the doctrine in an aphorism—"Paramountcy must remain paramount" and refused to define it or lay down any limitations—legal or otherwise—to its exercise. This caused great dissatisfaction among the Princes which was voiced at the next session of the Chamber of Princes. They exposed the real state of affairs in this connection and expressed their determination to get rid of the excessive, illegal and tyrannical interference.

In the meantime the Simon Commission was busy gathering materials and preparing its report. The Princes utilised this time in preparing their own schemes for meeting the difficulties of their future position and in carrying on a vigorous propaganda in Britain. They succeeded in demonstrating that the British Indian problem could not be solved until the position of the Indian States was clearly defined and the rights of the Princes were fully safeguarded. The Simon Commission asked for an extension of its terms of reference to deal with the problem of the Indian States and suggested an adequate representation of the Princes on the Round Table Conference which was to be convened to settle the Indian constitutional question.

III

Before discussing the proposals of the various bodies, including those made at the Round Table Conference,

it is worthwhile to understand clearly the needs and demands of the Indian Princes. In the first instance, the Princes do not like the talk of Independence. They are afraid that in an Independent India there will be no place for them. It cannot be said that their fears are altogether groundless. They, therefore, declare that they will oppose with all their might the severance of the British connection, and they put forward their treaties in defence of their attitude. Loyalty to the Crown is the first article of their faith.

Secondly, the Indian Princes insist that their relations are with the British Crown and not with the Government of British India and that the Paramount Power is the Crown and not the Government of British India. It is historically an untenable position as I have shown in my book "Indian States and British India: Their Future Relations", but it suits both the Princes and the British Government to accept it. The Princes, therefore, demand that whatever rights of Paramountcy may remain in the future they should be exercised by the Crown and not by any new Government of India, even if it be the Federal Government containing the States themselves.

Thirdly, the Princes demand a definite guarantee that their rights, position and privileges, their territories and dynasties as defined in the Treaties, Engagements and Sanads shall be respected strictly; that there shall be no interference from outside in the internal affairs of their States; that the form of government in the States is an affair of the Princes alone, and that no outside authority has anything to do directly with the subjects of the States.

Fourthly, the Princes claim an adequate voice in deciding all questions that affect both British India and the Indian States.

Fifthly, the Princes want a share of the Indian revenues —*i.e.*, the part that is ultimately paid by their subjects.

And lastly, the Princes demand the creation of a Supreme Court for the adjudication of all justiciable disputes between themselves and British India.

IV

In order to safeguard their position and rights the Princes had evolved by April 1928 a complex, expensive and cumbersome scheme of double diarchy which was easily dismissed by the Butler Committee as undesirable and impractical. The Princes had proposed the creation of an Indian States Council, consisting of the Viceroy and six members—three representatives of the States, two Englishmen without any previous experience of India and the Secretary of the Political Department. The Indian States Council was to serve as an executive to the Chamber of Princes and was to be in charge of the Political Department and was to deal with all questions relating to the Indian States. For the decision of all India questions the Princes proposed a Union Council which was merely the Indian States Council and the Executive Council of British India in joint session. And for the settlement of justiciable disputes and constitutional questions there was to be a Union Supreme Court staffed by "a Chief Justice and two other judges appointed for life on high salaries, selected from the best men in Great Britain."

This scheme was framed with the help of Sir Leslie Scott and was kept strictly confidential. It, however, leaked out and was immediately published in India. It was unfavourably commented upon and though it was submitted both before the Butler Committee and the Simon Commission the Princes had realised that it had no chances of success. And like practical men they set to work to evolve new schemes for the purpose.

V

Ever since the decision in 1917 to grant to British India responsible institutions gradually the ideal of an all-India federation has been present in the minds of both British and Indian statesmen. It was referred to by the authors of the Montagu-Chelmsford Report. Some of the Princes also have spoken of it as their cherished goal. But to the people of the Indian States an all India federation is not only a mere ideal to be achieved in some distant future as envisaged by the Simon Commission but something which is immediately practical. They pressed it before the All-Parties Committee—popularly known as the Nehru Committee—appointed by the All-Parties Conference on May 19, 1928, to draft a constitution for India. Mr Hosakoppa Krishna Rao of Mysore drafted a full-fledged federal constitution for India and pressed it for adoption by the All Parties Committee on behalf of the subjects of the Indian States. But the Nehru Committee while accepting the suggestion for the creation of the Supreme Court for India considered that the time had not yet come for a true federation as the Princes were not prepared for it. The Princes were no doubt expressing their readiness to join a "federation"—but the federation that they wished to join was to be not a federation of the ordinary type as existing in other countries like America, Canada, Australia, Switzerland, Germany, etc., but something which "may be called semi-federation, quasi federation, union or pact" which "in view of the unparalleled conditions connected with India and the Indian States, will call for a new adaptation of the ideas" as put by H. H. the Maharaja of Bikaner. What the Indian Princes wanted to join was in reality some sort of a Confederation ultimately proposed at the first Round Table Conference and not a Federation at all and the Nehru Committee realising that a confederation will only

benefit the States and not British India rejected it. They called it a "one-sided arrangement" and "a travesty of the federal idea" and expressed their readiness to welcome the decision of the Princes to join a federation—"after realizing the full implications of the federal idea" which they gave in the words of Professor Newton

Indeed there are some important difficulties in the way of creating a true federation in India immediately The fact is that the Indian Princes are not as yet prepared to make the requisite sacrifices for achieving a federal union—although they indulge in tall talk and use high-sounding expressions. What they are trying to do is to exploit the occasion for their own benefit. They wish to get rid of all interference in their internal affairs, they want to have an effective voice in deciding the all-India questions, they demand share in the all India revenues and compensations for territories ceded for protection several generations ago. But they do not want to lay down any constitutional limitations on their autocratic powers; they do not believe in including any list of fundamental rights for state subjects in the new constitution, they insist that the federal government will have nothing to do with their subjects, will have no direct authority in the States, will have no power to raise any revenues therein, and that whatever rights of Paramountcy that will still remain will be exercised not by the Federal Government but by the Crown Under such circumstances a federal union is impossible. Not until the Indian Princes—who have got States large enough to form independent units—consent to become constitutional rulers give up all outside connections, agree to recognise federal authority as the states do in other federal unions and establish one common citizenship for the whole of India, give up all claims to all India revenues and pay to the new government all revenue from all-India items, such as customs (the maritime States will

have to give up their customs revenue to the Indian Government) there can be no all India federation in any real sense of the term. Till then all talk by the Princes of an Indian federation is a mere lip service to an ideal. There is one thing more that is necessary and it is that all those States which are too small to maintain an up-to-date administration i.e., to be able to stand as independent economic units should either unite among themselves or merge themselves in the neighbouring States and Provinces. In a federation there is really no place for the very small, uneconomic States, and a federation of 562 States with the British Provinces is indeed unthinkable. The only patriotic course for the rulers of uneconomic States is to follow the example of Japanese chiefs and to renounce their ruling rights and to merge themselves in the ranks of the Indian nobility. Until this is done an all-India Federation will remain merely an ideal.

VI

Let us hope that it will not be long when the Indian Princes will show to the world that they are not less patriotic than the old Japanese chiefs and that they place the interests of their Motherland much higher than their own selfish, smaller, local interests. But in the meantime some new arrangements are necessary to adjust relations between British India and the Indian States.

The proposals made in this connection by the Simon Commission are as inadequate and unsatisfactory as in other cases and no one has taken them seriously. They are—(1) that a definite list be made of "matters of common concern", (2) that it be laid down in the Preamble of the New Government of India Act that there is a real "desire to develop . . . closer association between the Indian States and British India" leading to "an eventual Federal Union", and (3) that "a standing

consultative body containing representatives both from British India and the Indian States with powers of discussion and of reaching and recording deliberative results on . . . matters of common concern" be created. This Standing Consultative Body—called "The Council for Greater India"—is to consist of 30 members including the Political Secretary and is to be presided over by the Viceroy. The ten representatives of the States are to be partly elected by the Chamber of Princes and partly nominated by the Viceroy and the 20 representatives of British India are also to be partly nominated by the Viceroy and partly elected by the Central Legislature. The decisions of the Council are to be reported to both the Chamber of Princes and the Central Legislature. In the nature of things they cannot bind either and final decisions are therefore to rest with the Government of India as before.

Such then are the proposals of the Commission which had asked for special permission to deal with the problem of the Indian States. The Indian Princes found them unacceptable and proceeded to elaborate their scheme of an Indian Confederation. This was accepted in broad outline and tentatively at the last Round Table Conference, and it is believed, that it shall be finally adopted in London at the second Round Table Conference after the details have been filled in and perhaps some slight modifications made therein.

VII

The scheme of Confederation proposed at the first Round Table Conference is certainly a weak, cumbersome and one-sided one. It offers a number of advantages to the Indian Princes but almost none to British India. On the other hand, British India will have to work under several serious handicaps. But, it appears to me that

there is no better alternative available. All that can be done is to suggest a few improvements and to hope that it will soon give place to a real federation. To my mind, the chief and almost the sole merit of the proposed Confederation is that it is bound inevitably to lead to a true federation. In such matters there is no turning back—the looser union must result in course of time in a more complete union.

What then will be the position of the Indian States in the new Constitution?

The first Round Table Conference has proposed that they should enter the Confederation either singly or in groups. I am afraid this question of the entry of the States and their representation in the all-India polity has not yet been squarely faced and it is doubtful whether even the second Round Table Conference will have the courage to deal with it in a straightforward and satisfactory manner. The Princes are trying to solve the problem in their own way. The chief difficulty is created by the rulers of smaller States who feel that if representation is given to each State or group separately they will be nowhere and the only gainers will be the bigger States. They, therefore, propose that the States should be represented through the Chamber of Princes which should be made more representative than it is today by the addition of more rulers of the smaller States. Leaving aside the legitimate objections of the bigger States this indirect representation is undesirable from the point of view of future developments. What is necessary is to pave the way for a true federation in the not-too distant future—and that can only be done when the States enter the Confederation as separate units like the British Provinces. In my opinion it is necessary to face the question frankly—even if many of the smaller States refuse to join. As I have said already the smaller States cannot hope to

retain their separate existence in a federal India. Moreover, it is necessary to remember that though their number is alarmingly large their area and population is very small. Out of a total area of 5,98,138 square miles and a population of over 68 millions as many as 521 smaller States—the remaining 41 I have classed as larger States—represent altogether only 85,000 square miles and a population of about 18 millions. It will, therefore, not matter much if even the majority of smaller States refuse to join the Confederation. In my opinion, it is necessary that the second Round Table Conference should draw up a scheme of representation for both houses of the all India Legislature assigning definite number of seats to each State or each group of States and each Province—so that each State may know its own position in the new constitution and make up its mind to join or to keep out of the Confederation.

Secondly, it was proposed at the first Round Table Conference that the federal Legislature should consist of two houses in each of which the States should be adequately represented. The Princes had, however, insisted that it will be for the individual States to decide as to how they will choose their representatives. The total membership of each house and the proportion of seats allotted respectively to British India and the States were not decided at the first Round Table Conference and will have to be definitely fixed at the second Round Table Conference. I suggest that the total membership of the Upper House should not exceed 150 and that it should not be less than 350—roughly one for each million inhabitants—for the Lower House. To the Upper House the States may be allowed to name their representatives but the representatives to the Lower House should all be elected on one uniform basis both from the States and the British Provinces. This will make the working of the Parliamentary system easier, smoother and more efficient as it will

then be possible to form common parties. Moreover, the difficulty of representing the States on the Executive and the question of voting, etc., on purely British Indian question will be solved automatically. And it need hardly be said that it will then be very much easier to turn the Confederation into a Federation.

Thirdly, the Princes had insisted at the first Round Table Conference that the "Federal" Government shall have nothing to do with the form of government in the States or with their internal affairs or with the rights and privileges of the State subjects and that the "Federal" Government shall have no direct authority in the States and on State subjects. I have suggested elsewhere that although it may not be practical to insist today that those States which wish to join the Confederation should first establish constitutional rule it is quite feasible to make it a condition precedent of entry that they should carry out certain minimum reforms in the system of administration on the lines of the most progressive States and that they should themselves grant certain fundamental rights to their subjects in the new constitutions that they may give to their States. On these two questions it is essential that something must be done. Public opinion both in the States and British India is quite definite and strong, and it will be a short-sighted policy for the Princes not to yield on them. And if one is to believe their Highnesses of Kashmir and Bikaner this will not mean any change or innovation. To quote the Maharaja of Kashmir "such rights (Fundamental Rights of Subjects) are already in operation in my State, as also in many other States." Hence to embody them in a constitution which also effects certain minimum reforms in State administration—as repeatedly recommended by the Chamber of Princes—and to make the grant of such constitutions a condition precedent of entry

will not be either unreasonable or difficult of achievement. In the transition period it is not necessary to establish direct touch with the State subjects or to have direct authority in the States. On the other hand, there should be some guarantee that the State authorities shall enforce the acts decrees and orders of the Confederation on common matters within their States. There is no desire on the part of the people in British India that the Confederate Government should have any rights of interference or intervention in the internal affairs of the States, but there ought to be some definite arrangements made about securing minimum reforms in the administration of States and of preventing gross maladministration in them. It may be that during the transition period these powers are entrusted to the Viceroy alone.

Fourthly, the Princes made it clear at the first Round Table Conference that the Confederate Government which is to decide and administer common matters—questions of all India concern—called the "federal subjects"—should be a responsible government. But the scheme of responsibility provisionally suggested there is a most unsatisfactory one. The safeguards that have been put down are too sweeping and too wide and leave hardly any real power to the Legislature. Their sphere must be rigidly circumscribed if the "Federal" Legislature is to have real powers. And this talk of a two-thirds majority of both Houses sitting together to make the ministry resign must be given up if there is to be any responsibility to the Legislature. The ministry must resign as soon as it is defeated by an ordinary majority on an important question in the Lower House, otherwise it will cease to be responsible in actual practice.

Fifthly, the Confederate Government must be given adequate funds to carry on "Federal" functions and such funds must be raised on a uniform basis all

over the country. For this purpose certain sources of revenue will have to be made "Federal" and all income from them—both from British India and the States shall go to the Confederate Government. In this connection it is necessary to mention that revenue from customs both in British India and the maritime States will have to go to the Confederation—so will the revenue from railways. This question of financial adjustment must be looked at now from a different point of view than it was at the time when the Butler Committee issued its report.

Lastly, there must be a "Federal" Supreme Court to decide all constitutional questions and to settle justiciable disputes between British India and the States or between one State and another State. It is also desirable that the Supreme Court should be in addition the Final Court of appeal in India and the Princes will be well-advised to withdraw their opposition to this proposal.

VIII.

Such in outline are the suggestions for the improvement of the scheme of Confederation tentatively proposed at the first Round Table Conference. If they are adopted at the forthcoming session of the Round Table Conference the scheme will certainly become more acceptable to the peoples of both British India and the Indian States, and although they may not make them fully reconciled to the idea of a Confederation they are bound to accept it as an inevitable stage between the present state of affairs and a full-fledged Indian Federation.

G. N. SINGH.

COMMUNAL REPRESENTATION

In a representative democracy, which alone is possible for a big country like India, the form of representation exerts a predominating influence over political life. Life is so intertwined that whatever may be the form of government or representation, the predominating interests and feelings always influence the political life. Still, the form of representation emphasises such aspects of life as has been the basis of representation and discourages influences adverse to it. In a democracy on the eve of elections such feelings are aroused and such facts are dramatised as are connected with the medium of representation and are likely to contribute to success. The form of representation tends to commit the aspirants to political career to certain ideas and feelings, and thus creates vested interests, which cannot easily be swept away, and often needs a revolution. The form of representation thus sets up the standards of political life and determines the nature of democracy. To vitiate representation is to corrupt democracy at its very source. The realisation of democracy is so intertwined with the problem of representation that the former can be conceived of only in the terms of the latter. Democracy can be realised only through adequate representation. Hence, at the inauguration of Swarajya, the primary consideration of the advocates of democracy must be the nature of representation. India's goal cannot be realised through a corrupt or inadequate system of representation. Nationalists must be as insistent on an adequate system of representation as they are on their demand for the transference of power from the British Government to an Indian Government responsible to Indians. The latter will fail to serve its

purpose without the former. While a certain section of Indians is insistent upon communal representation, others, though cognizant of its defects, support it on the plea that it will accelerate the speed of the transference of power. Thus, attempts have been made to embody communal representation by threat and persuasion in the constitution of India. However, such an important problem as this must not be decided merely on grounds of expediency. It requires a more thorough and impartial consideration. An attempt has been made in the following pages to consider the problem of communal representation from a comprehensive, permanent, and scientific point of view.

Social life needs differentiation on a functional basis. Such differentiation means that the authority of every functional association will directly emanate from and extend to the people, and that every association will limit its activities to its own functions. It necessarily implies that no association will claim to represent the people in another association and for another function. It obviously means that no function will work for another function, and that one function will influence the other only so far as the activities of the latter directly and immediately affect the former. Thus, functional differentiation demands that the authority of the state must directly emanate from and extend to the people and that it must be based on the functions which are assigned to and performed by the state. The other functions can influence the state only when its activities directly and immediately affect them. Every function cannot claim to represent the people in the state or influence all its activities, simply because every function is directly and immediately influenced by some activities of the state. Such representation will virtually amount to functional chaos rather than functional representation. Many activities of the state

indirectly affect many other functions, but functional differentiation in social life can never be secured if every function will claim to interfere directly in the activities of another function, simply because the latter indirectly affects the former. The influence of every function on the indirect effects of the other functions upon it must be secured indirectly through the internal coordination of all functions in human will, the source of every activity.

The functional differentiation of the social life necessarily implies that the state must be responsible only for the civic and political functions and that its relations with the citizens must be based on civic consciousness. Civic responsibilities and rights cannot be based on religious feelings or communal loyalties. The want of proper differentiation between civic and religious functions and spirit has always tended to work against the best interests of both of them. Religious feelings are too strong to serve the civic consciousness. The former only tend to enslave the latter and in that process begin to be aggressive and intolerant. In countries where people profess a number of religions the control of the state by religious feelings has in general resulted in inquisitions and persecutions. It is utopian to hope that in India the religious feelings can be harnessed in the service of the state or of civic consciousness. Whatever the past traditions of Hinduism and Islam might be, today the feelings are so embittered that if the state does not try to foster civic spirit, those religious feelings will soon lead India to a horrible chaos. The best, perhaps the only way, to save India from chaos is to divorce politics from religion and develop civic consciousness and spirit through vigorous activities of fully democratic institutions of the state. The state must guarantee full religious autonomy on the condition that religion will not directly interfere in

the affairs of the state. This arrangement will not be against the spiritual development of the country. The close alliance of religion and political activities only tends to secularise religion. Who can deny that the religio political controversies in India have worked to neutralise the spiritual values of religion? So long as the state is constituted on the basis of religious loyalties, religion is bound to be exploited by the politicians for their personal ends. In the political activities differences have to be dramatised and feelings have to be aroused. If the religious loyalties constitute an element in the political life, religious feelings are bound to be aroused. Religion, then, cannot function as a healing balm. Religion can fulfil its spiritual purpose only when it confines itself to the enrichment of the culture. It must elevate the moral tone of the social life through the evolution of personality and the presentation of better social standards rather than by an actual participation in the political activities of the state.

The study of the functions, assigned to the state, and the fundamental rights, guaranteed to the persons and associations in the Nehru Report and other schemes of a constitution for India, will make it clear that with the exception of religious endowments, and the family law the discretion of the state in its activities cannot adversely affect any particular religion or sect. In fact, religion is directly related only with these two activities of the legislatures. Perusal of the problems that have aroused religious controversies will also show that permanent solutions of almost all of them have been suggested for adoption as fundamental guarantees in constitutional schemes. Religion can, then, claim to participate in the activities of the state only so far as they deal with the problems of the religious endowments and the family law. The change in the nature of representation in the legislatures

because of the close association of religion with a few functions of the state will surely be against every principle of social organisation. The participation of religion can be secured by the guarantee of a special procedure in the case of such problems. Before any Bill concerning them is finally considered by the legislatures, full opportunities through semi-judicial procedure of the select committee must be given to religious associations to express their ideas on the Bill. It must also have the support of the majority of such members of the legislature as belong to the community concerned. In the administration of the religious endowments the cooperation of the representatives of the religious associations must also be secured. These measures obviously secure enough participation of the religious associations as well as consideration of these questions from the religious point of view. The majority of the Hindu, the Muslim, and the Sikh members of the central legislature are sure to be returned from the constituencies where voters of their respective communities are in good numbers, even if they do not form a majority. They cannot disregard the religious susceptibilities of their constituents. Even those members who have secured their seats on the support of the voters who do not belong to their religious communities can scarcely dare ignore the public opinion of their respective religious communities in religious matters. Hence, with these securities religion must retire from direct participation in the activities of the Government. If religion believes in its spiritual values, it must try to elevate the moral tone of the social life through the enrichment of culture, the evolution of personality and the presentation of better moral standards.

Fundamental rights secure cultural autonomy as well as full guarantees against any discrimination of the state on the basis of caste, creed or race. They also guarantee indiscriminate behaviour of the associations of general

public importance. No act of the state is required to secure it. The activities of the state will be confined mainly to secure economic equity and to minister to the civic and political needs of the society. The composition of the state must, then, naturally be determined mainly by the considerations of the economic and civic development of the country. In India differences in economic interests and political views, which alone must determine the policy and programme of the state, do not coincide with the communal divisions.[1] Members of different communities

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[1] Summary of statistics concerning seven provinces (U.P., C.P., Bihar, Bengal, Delhi, the Punjab and Assam, collected from Census Report of 1921). There were no statistics on the point concerning Bombay and Madras.

	(1) Total Number	(2) Hindus	(3) Muslims	P.C. of Hindus	P.C. of Muslims
(1) Population	161624142	119742851	51674488	65.4	28.45
(2) Production of raw material	189287395	92053827	41315903	66	29.73
(a) Ordinary cultivators	110343636	71315380	31601603	64.62	28.64
(b) Income from rent of agricultural income	3800872	2197429	1388773	57.81	36.54
(c) Field servants and Farm Labourers	19649372	14057466	4135650	71.8	21.04
(3) Industry	17896384	10814063	6328596	60.42	35.36
(4) Trade	8727232	6257359	2096305	71.7	24
(5) Transport	2203799	1256662	648896	56.13	38.5
(6) Public Services	1730272	1032055	574809	59.68	33.22
(7) Persons living on their income	163979	92113	49607	55.5	29.94

The above statistics clearly show that the occupational division of India is not communal. The variations in two instances never exceed more than ten per cent. Because of religious views only a few Muslims are engaged in banking or money lending. But as borrowers the Hindus have same economic interests as the Muslims.

have allied economic interests and political views. For the sake of progress and prosperity India must substitute leadership based on social service for loyalties based on traditions. The latter do not encourage experiments and the inauguration of new policies. They uphold an hierarchy of privileges and cannot be the basis of a homogeneous civic life which stands for liberty and equal opportunities for all. India's masses can secure economic justice only through the consciousness of their economic needs and the active co-operation of their resources. The basis of co-operation must be the identity of economic interests and the conception of civic needs and responsibilities. Social unity needs some integration of economic interests and political views in the country before differences are dramatised in elections. Interests and views can be better harmonised through the slow process of undifferentiated public opinion than the integration of such policies and programmes in the legislature as are based on class interests and loyalties. No legislature can ever function without some harmonisation of interests and views through public opinion. Hence, functional differentiation and social needs demand representation through a general electorate.

Class representation stops the process of the integration of views and interests through the interactions of public opinion. It accentuates class differences. They are not only emphasised and dramatised during the elections but pervade the whole political life. Class representation demands class loyalty rather than civic responsibility and national service from the members of the legislature. The persons who are to secure and to justify their position in public life on the grounds of their services to a particular class or community, can scarcely be expected to realise their duties to the nation as a whole. They cannot but prefer service of their own community

to that of the whole nation. Their standards of public service are bound to be coloured by the narrow communal outlook. Communal representation inclines politicians not to inculcate national spirit in the people and to work for social harmony so much as to fan communal disturbances so that they may have an opportunity to advertise themselves as champions of their sides. In elections communal representation substitutes the irrelevant communal considerations for real economic and political issues. The problems before the legislature have scarcely any chance of fair consideration. Communal susceptibilities and prejudices are exploited by the few to serve their own ends. In India most of the members of the legislatures, who have secured their elections mainly on communal issues, have invariably voted in favour of the landed aristocracy. They have failed to secure any party cohesion or agree upon any definite programme of work in the legislatures. The communal bond has not been strong enough to hold them together when personal interests were involved. They have been without any guiding principle of action on the problem of general public importance. Their conception of social service has in general been very narrow. The political life of the country is in general divided in a number of political sections of every community.

While the science of public life demands functional differentiation, its strategy needs the emphasis of such facts as might secure power. Communal representation is not only a defective science but also a rotten strategy. It has constantly worked against such social atmosphere as alone can secure political power to Indians. Nor does it serve the cause of minority communities. Their interest does not consist in emphasising and accentuating communal differences but in establishing the political life of the country on civic consciousness. No

minority can ever secure power through communal representation. Its members can be sure of fair chance in the political life in the degree in which the civic consciousness and spirit substitutes communal feelings and loyalties. The interests of minorities can be impartially considered more by the political parties, which have secured seats in the legislatures through general electorate, than by the communal parties organized on the exclusive votes of the majority community. The separate electorate makes the majority wholly independent of the minority and its votes, and usually hostile to it. The views and interests of the minorities can influence general public opinion before elections much more easily than the exclusive communal groups in the legislature can affect the policy of the state. Their activities, which are in general mainly confined to the protection of minority interests, only irritate the majorities and give chance of misrepresentation. The political communal organisations of the minorities only incite the majority communities to establish corresponding organisations. The integrating as well as the disintegrating influences of communal representation are common to all communities. The minorities cannot expect that while they will benefit by its integrating influence, the majority will only suffer by its disintegrating influences. The study of the movements, which have influenced the Hindu and the Muslim communities during the last few years, will clearly show that neither the majority will be slow to profit by the integrating influence of communal representation, nor the minority will be able to protect itself from its disintegrating influence.

Thus, communal representation puts a premium on parochialism. It tends not only to weaken the strength of the political parties and the efficiency of the legislatures, but also to narrow the vision of the people and to lower

the standards of social service. It eclipses the real political and economic problems, and postpones the political education of the masses. It tends to work against the creative energy, and emphasises the importance of traditions, many of which are scarcely democratic or in general conformity with the present social needs. It does not inculcate national spirit but only feeds communal prejudices. It cannot promote national unity, but only tends to arouse communal feelings and accentuates communal differences. In India it has tended not only to confuse religion with politics, but also to create religious bitterness. It cannot create an atmosphere of trust and mutual service. It only generates distrust and fear. Every community tends to fear that any power held by a member of another community will invariably be used only in favour of his own community. One does not feel secure of the impartial protection of his interests from a servant of the state, who is a member of some other community. Communal representation substitutes communal loyalty for civic responsibility. Civic consciousness does not form a link between the state and its citizens. The state becomes powerless before communal feelings, which dominate the political life. The state can, then, scarcely protect the minority community from the majority. The minority community loses chance of protection in the degree in which communal feelings substitute civic consciousness. Communal representation makes the majority wholly independent of the minority and its votes and usually hostile to it. The minority community never feels secure enough to be creative and progressive. Its growth is stunted by the sentiments of fear, distrust and hatred. Communal representation corrupts not only the political life of the nation but also the social life of every community. Hatred and suspicion generated in the political life begin to pervade the social life, class

psychology tends to disintegrate every community in sections. Communal representation causes functional chaos so much that most of the energy of the communal organization is spent on political matters. The evolution of the social life tends to be a secondary consideration. Religious and social measures are adopted on the basis of their effects on the communal strength in politics rather than on that of their creative social values.

MUKUT BIHARI LAL

The Imperfections of Civilization

Civilization is barely ten thousand years old and, in the perspective of evolution, is yet in its infancy. Nor has its short career been one of uniform progress. Set back, perversion and waste are writ large on human history and happiness which consists in harmonious self-realization is still the exception rather than the rule. The appalling mass of evil and misery has, in the realms of literature and philosophy, provoked many revolts, subtle or frank, against civilization itself. That is what lies at the root of the pessimism which is a pronounced feature of certain schools of Indian and German philosophy. The mood of the "noble savagery" of Rousseau's Discourses has not completely disappeared. It was a significant title that Edward Carpenter gave to one of his books—'Civilization, Its Cause and Cure.' Bakunin had a favourite toast "To the destruction of all law and order and the unchaining of evil passions." Another contemporary Philosophic Anarchist was not a whit behind "I shall arm myself to the teeth against civilization," exclaimed Proudhon. "I shall begin a war that will end only with my life."

The Material Abundance

If the present conditions of life were incapable of radical transformation, annihilation would be the best thing that could happen to humanity. But there are signs which indicate that human existence is approaching a turning point which, unless the race is altogether bankrupt of wisdom, may mean a new and brighter era. The accumulation of scientific knowledge and its application to production have multiplied the supply

of food, other necessaries and even luxuries Rightly organized and distributed, our resources should suffice to raise the standard of life all over the world and to place everyone above want and within reach of comfort. Nothing can be more instructive than to analyse some of the features of the economic "depression" which is the salient factor in the world situation to-day. Producers have long agitated for a restriction of the output of rubber, cotton, sugar and jute The International Conference of wheat-growers, which concluded its deliberations in London on the 23rd of May, 1931, arrived at the conclusion that too much wheat was being grown, and recommended, where possible, a reduction of the area devoted to that commodity Almost simultaneously on the 14th of May, the Indian Merchants' Chamber drew the attention of the Government of India "to the menace to the agriculturists of India from the imports of rice since recent years into this country sometimes in large and sometimes in small quantities." They recommended the "total and effective prohibition" of the importation of Japanese rice in to India. While the Bombay millowners always yearn for protection and occasionally complain of the accumulation of stocks, Lancashire bursts into righteous indignation when the consumption of its superfluous textiles is not recognised by the world as its primary duty The vistas of production opened out by the Five-Year Plan in Russia have alarmed the industrialists of Western Europe and America. In the United States a single firm is turning out automobiles in such abundance that their consumption is the one problem with which it is faced. Examples can be multiplied ad infinitum to show that it is not from shortage of commodities that the "depression" has resulted. Indeed, looking at the situation from the producers' point of view alone one would almost think that the world were suffering from a surfeit of goods and

that there was a little too much to go round. To complete the tale, millions and millions are unemployed permanently or temporarily, in Great Britain, the United States, India and elsewhere. At the same time, rationalization promises to increase production further still, and if accompanied by state regulation and international co-operation, to a point which we can scarcely imagine.

The Importance of the Change

Leaving aside the question of distribution for the moment, it is clear that our resources are now capable of raising humanity to a level of comfort undreamt of in the past. This stage of evolution could not possibly be reached earlier than the present scientific epoch. To realize its stupendous importance and value, it is necessary to recall that the past limitations of the supply of food and other commodities were chiefly responsible for those wars and civil struggles whose aftermath divided society into grades of conquerors and conquered, nobles, freemen, serfs and slaves. The caste system of India and the ancient Middle East and, to a lesser extent, the classes everywhere represented the outcome of centuries of strife for economic vantage. The economic factor was also largely responsible for degrading woman to the level of a household drudge.

A Turning-point?

A radical departure from this system of the exploitation of man by man is rendered possible by the new material abundance which science has brought. Now it is a problem in adaptation, the master feature of life. Will man adapt his morals and scale of values to the new environment? Will he bring his enlightened self-interest, his prudence and his social sympathies into line with his scientific achievements, with the fact of the world as a

single and plenteous economic unit? Taken unawares, men failed to shake off the domination of the past schemes of values and allowed themselves to become slaves of the instruments of the Big Industry. To quote a Greek saying, "Things are in the saddle and ride mankind." Will man now regain that control of the environment which is of the essence of civilisation? In terms of economics, the question is one of organizing production and distribution in the cause of *world* welfare.

The Diffusion of Knowledge.

Next to the material abundance, the most hopeful feature in the present situation is the diffusion of enlightenment through the growth of towns, the newspaper press, mass-education and the facilities of communication including the wire and the radio. Knowledge, like property, is power, and grave inequalities in its distribution may be as derogatory to the general welfare as in the case of the latter. For the first time in human history, scientific appliances hold out a chance of enlightenment to all. Whatever the perversions of the press and the screen, the fact remains that will and organization alone are needed to elevate the race to a high plane of intelligence which should favour good life for all.

Organization

The third striking feature of the world-situation is large-scale organization rendered possible and in certain respects inevitable by the Industrial Revolution. Organization, confined in the past generally to the church, the nobility, government and local guilds has now been adopted by labourers and peasants and is transcending national boundaries. Thanks to the exigencies of the Great Society, the Labour Movement is acutely class-conscious but

whatever its moral deficiencies it is already a factor to reckon with in the realms of economics and politics.

Humanity at the Cross-roads.

To sum up, science, which is still advancing by leaps and bounds, has already facilitated (1) the removal of some of the fundamental causes of human strife and the elevation of the general standard of life all round, (2) the spread of enlightenment among all sections of humanity, and (3) the organization of the masses. The conjuncture is fraught with the possibilities of a transformation of the conditions of human fellowship. None can predict the exact course of the changes that may ensue. Nor can anyone be blind to the strength of the forces that cluster round the sentiments of race, colour, nation and caste, the varieties of group selfishness and theological fanaticism. When they harness science in their service, they induce pessimism and despair. But on a long view of the course of evolution the outstanding fact appears to be the marvellous facilities of general advancement. There open out vistas of democracy in the deeper sense of the term economic and intellectual conditions in which every individual may find an opportunity of full development, of self-realization, that is to say, of happiness.

Conscious Effort.

Sociology has now outgrown that narrow conception of the law of cosmic evolution, that false interpretation and "scientific determinism" which denied the efficacy of conscious effort and left man to the mercy of blind forces. In spite of anti-intellectualists, man is not necessarily the slave of his instincts or emotions. Reason is not exotic or artificial, it is as natural to man as integral a part of his make-up, as the instinct of self-preservation. Enriched and invigorated by the advance of knowledge,

it should become more and more decisive in the determination of human conduct. From the psychological standpoint, the old question may be re-stated thus Will man who has conquered external nature succeed in conquering his own inner nature and rise above the pettiness, narrowness and selfishness fostered by the old conditions of life which it is now possible to transcend? It is a problem in social ethics, in ultimate analysis it is also an economic problem, in the present maze of social and economic complexities, it is also an intellectual problem If we can see life steadily and as a whole, if we can penetrate through sectional barriers to human solidarity, and if we can adequately organise our unprecedented and increasing resources, we can accelerate our progress to conditions under which happiness through self-realisation will be the rule and, in the words of Kant, every individual will be regarded an end into himself and not a mere means to the ends of others.

Non-Violence.

This is the vision of Democracy, using the term in its wider and not merely political, sense. Its realisation depends on progress in several directions. In the first place, the elimination of force from human relationships, except for the purpose of constricting patently anti-social behaviour, is necessary to make the world safe for good life. The imposition of the will of one group over others for the sake of group advantage is the negation of the higher elements and values of life. It tends to depress all concerned to the level of the brute. It means the denial of freedom and development, which is of the essence of life, to numberless persons and thus chokes the democratic principle at the source. The cardinal importance of non-violence in the ethical scheme, that is to say, in the sphere of human fellowship as a whole,

was clearly perceived by the founders of Buddhism, Jainism and Christianity. Partly from the political standpoint, the doctrine has been revived by Count Tolstoy and Mahatma Gandhi. Nothing can exceed its importance in planning the future of civilization. It is not to be understood as mere policy or expediency, nor as mere religion in the theological sense of the term. It demands recognition as the permeating principle of the dealings of man with man. It rules out militarism which has brought about numerous gradations of political and economic subjection, riveted the yoke of class on class within the same state and thus sacrificed the higher to the lower life of man. War and democracy are inherently incompatible; the former is an instrument of the suppression of wills by wills; the latter postulates the moral freedom of all wills. Politically, war and the constant preparedness for it lead to the concentration of authority in the hands of the few. Pacifism is the indispensable basis of democracy. The world is still armed to the teeth and force is constantly invoked to sustain or controvert the politics of prestige and exploitation. But the holocaust of 1914—18 held out the warning that war had grown out-of-date and could be resorted to only at the peril of general ruin. It is significant that some of the states to-day are genuinely eager for Disarmament, while almost all have begun to pay at least lip-homage to the ideal of Perpetual Peace and signified their assent to the Kellogg Pact for the renunciation of war as an instrument of policy.

International Co-operation.

Something yet more positive than the abolition of war will, however, be needed for the complete realization of the democratic ideal. Economic improvement in future will largely depend on frankly accepting the world as a

unit, specially a single economic unit. A certain degree of international co-operation is already an established fact in finance, banking, and a few aspects of capitalist enterprise and labour organization. The co-operative decisions of the Governors of various National Banks have been known to exercise considerable influence on industry and commerce. The International Labour Office at Geneva is constantly arranging conferences to project socio-economic legislation and agreement among a multitude of states. In spite of the rude shocks of 1914, Socialism has not relinquished its international character. International economic co-operation is still piece-meal haphazard and therefore often self-cancelling. The spirit of genuine internationalism has to struggle at great odds against nationalistic tariffs, preferences, and competitions, and against unintelligent "over production" or enforced under-production. But the possibilities of international co-operation are unlimited, for instance, in the production and distribution of raw materials and await a new spirit and efficient organization to yield beneficent results.

The Abolition of Poverty

The object in view may be defined as the abolition of poverty which is incompatible with the democratic ideal. The individual ceases to be an end unto himself as soon as he is compelled by want to accept any situation on any terms. The higher life, particularly in its intellectual and political aspects, is denied to those who can command no leisure and all whose thoughts or energies are occupied with making the two ends meet. The Greek philosophers understood this long ago and, false to the true ideal of democracy, put the manual workers, the slaves, beyond the pale of citizenship. Modern philosophy has grasped the spirit of democracy

and must insist on a national or rather international minimum

Equality of Opportunity

Democracy as such does not postulate complete economic equality nor the complete socialization of property But even the restricted experience of the modern age has shown that it does not harmonize with those stupendous inequalities of wealth which give some people power over the conditions of life of others and over the votes of electors and legislators Socially, the underlying principle of democracy is equality of opportunity which depends, besides pacifism and abolition of poverty on two measures which, in principle, have already been initiated in many countries Steeply graduated taxes on incomes, heavy death duties or succession duties, have long been a feature of national budgets and, since the close of the War, have gained in range and intensity Czecho-Slovakia has tried the bold experiment of the capital levy In the background of a national minimum, the taxation of incomes and regulation of inheritance, if carried further, will go a long way to bridge the chasm between class and class, provided that high education is universalized Free and compulsory primary education is now accepted as one of the primary duties of a civilized state. Universal secondary education already forms a plank in the platforms of progressive parties in several countries in Europe When we have actually adopted universal high education as part of the normal functions of a government, we should have taken the greatest step towards equality of opportunity

Tolerance.

The series of vast changes which the realization of the democratic ideal requires must be supplemented by one other reform Groups and associations are inevitable in every society The state cannot exhaust the possibilities

and fulfil all the requirements of human life. The play of personality must centre round various churches, unions, clubs and fellowships. "There is very little difference between one man and another," said William James, "but what little there is, is very important." Differences of opinion, belief and outlook are not only unavoidable but also desirable, lest dead monotony should choke the springs of initiative and progress. But the theological rancour and sectional animosities resulting from them have poisoned human relationships. Tolerance of diversity is one of the supreme needs of humanity and one of the conditions of the realization of democracy. The creed of tolerance will certainly be furthered by the enlightenment and social measures discussed above but it also calls for propagation with the fervour and intensity which marked the apostles of religion and of nationalism. Politically, an atmosphere of tolerance is the *sine qua non* of public, as distinct from sectional, opinion on which the working of democratic institutions depends.

Conclusion

The democratic ideal represents an attitude towards life a *weltanschauung*, a principle of human fellowship—the self-realization of all to society. Its practical implications savour of Utopianism and run the risk of being dismissed with a sneer to-day. But there is nothing inherently impossible about it. In spite of much that is depressing in the past and in the present, it is not difficult to perceive that the deeper forces of evolution have brought man to a parting of ways. If his steps can be guided by instructed reason and widened sympathies, he may find himself some day in a new world. In any case, it is worth while to grasp the full implications of an ideal and see what can be done to translate it into practice.

BENI PRASAD (M.A., PH.D., D.Sc.).

SIDE-LIGHTS ON CURRENCY IN MAHARASHTRA IN THE SEVENTEENTH CENTURY

Before the art of manufacturing coins had reached the degree of perfection which it has now attained and before national systems of currency had fully developed under the control of States, stamped pieces of gold, silver, copper and other inferior metals circulated side by side and were exchanged at rates based upon the comparative prices of the bullion content of the coins. This general proposition holds good, in an interesting manner, of the conditions prevalent in Maharashtra during the early period of the history of the Mahratta power, so far as these are revealed in the authentic documents of those times which have been published in recent years. The work[1] done by the *Sva Caritra Kā ṭhālaya* of Poona is calculated to help the student by providing him with much useful material in this field. The subject of the economic condition of Maharashtra in the seventeenth century is still an unexplored region, and the interest of that attractive theme is enhanced by the fact that the material now available, affords only distant glimpses of the truth. Our authorities are few and our guides are not always decisive and reliable. We have, therefore, to make our way through doubts and uncertainties in the hope that full light will soon appear. It is proposed, in the present article, to draw attention to a few facts, conclusions and inferences in connection with the currency which circulated in the Mahratta country during the century that witnessed the rise of the Mahratta Power. Original and

[1] शिवकालीन लेखसंग्रह, खंड १, प्रस्तावना

authentic records will be used for this purpose, and an attempt will be made to show how they bear out the truth of the proposition stated above.

Money economy had not fully established itself in Maharashtra in the seventeenth century, and not only village *bakkalas* such as the *Mukādam*, the *Deshmukh* and the *Kulkarni*, received their dues from the people in kind but the government likewise was paid its revenue partly in money and partly in the shape of grain and other produce. Agricultural produce and simple manufactures were available in the country in abundance as compared with the size of the population and its wants; and there was a very small demand for money in circulation. Such money as we find mentioned in the documents of the time, consists mainly of *Hūns* of gold and *rukās* of copper, and the *lakā* figures very prominently in the accounts. The *Pāgā* and the *Dāma* occur but rarely, and the silver rupee attains growing importance with the advancing decades of the seventeenth century. The supply of gold being ample in Southern India, that precious metal occupied the position of a *gunja*-standard, and a variety of *Hūns* are found in use in the Maharatta country. The *Hūn* or the *Pagoda* of the European merchants appears even in the smallest transactions[1] in the earlier part of the period we are dealing with, and petty grants are made and loans are given in terms of that coin. As prices in those days were extremely low compared to what they are now, the copper *Rukā*, weighing about a fourth of a tola, was extensively used in all kinds of transactions, but it is interesting to note that in the earlier decades of the seventeenth century, instead of the silver rupee, coming in between that low-priced copper piece

[1] See "शिवचरित्रप्रदीप" पृ० ६३, ६८, २०२; "शिवचरित्रसाहित्य" खं० २, पृ० १६३-१६३।

and the gold *Hōna*, it is the latter that is employed even to the fraction of one-sixteenth.[1] The ordinary demands of the people were satisfied with the copper coins, and the *Hōna* was employed where formal contracts and large values were concerned. There is evidence to show that the circulation of the rupee increased with increasing contact with the Moguls, till at last under the Peshwas, the silver coin superseded the gold pieces almost completely. With increase of population and of political and commercial intercourse between the north and the south of India, copper pieces would serve only as subsidiary currency and as the supply of gold would not meet the demand, the rupee came more and more into use. This evolution or transition is very clearly traceable in the historical papers of the seventeenth and eighteenth centuries. After the death of Shivaji and during Aurangzeb's invasion and occupation of Maharashtra, the rupee appears to have established itself as the standard currency of the Mahratta country. While the *Hōna* struck by Shivaji after his coronation has been discovered and identified satisfactorily and his copper pice is well known, the rupee attributed to him has not been traced and seems to be only legendary. The silver लारी[2] is the standard coin of the tract along the west coast, the lowest denomination here also being the copper *Dāka*, forty-eight or sixty of these pieces going to the silver coin.[3] The *Hōna* was not,

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[1] चित्रगितादिन

[2] "The *larin* was Persian money and reached India in large quantities through the trade with that country. It was not a coin in the ordinary sense of the word but a bent rod or bar of silver stamped at the end. It was worth rather less than half of one of Akbar's rupees." Moreland's "India at the Death of Akbar."

[3] See द्वितीयसंकलनपुष्प of the भारतइतिहाससंशोधन मंडळ, pp. 48 and 76.

however, unknown in these parts, and rupees sometimes make their appearance, as may be seen from the papers printed in the report of the Second Annual Conference of the Bharata Itihāsa Saṁśodhaka Maṇḍala.[1] Here a half *Hūna* is stated to be equal to 3 *lars*, and as a *Hūna* was about Rs. 3½ in value, we know that the *lari* was about half a rupee in value. It must be emphasised in this connection that these ratios were not fixed and varied from time to time and place to place in accordance with the changing purchasing power of the metals concerned. Thus the *Hūna* is worth Rs. 3 to Rs 4, and about 10 to 12 *Tankās* go to the *Hūna* in different circumstances. In fact, the money consisting of bits of the three metals, was an article of merchandise, and the *Sarafs* (modern shroffs) did the money-changing, governments having to assign the duty of examining and assaying the currency to special officers.[2]

The *Rājavyavahārakośa* (राजव्यवहारकोश) composed by Raghunāth Paṇḍit under instructions from Chhatrapati Shivaji, has enumerated the principal coins in vogue in his time in Maharashtra, with their Persian names and Sanskrit equivalents, thus:

"[illegible] ॥

[illegible] ॥

"[illegible] ॥ २९ ॥

'[illegible] ॥

'[illegible] ॥ ३० ॥

"[illegible] ॥

'[illegible] ॥ ३१ ॥

From the above verses it will be seen that gold, silver and copper coins were in circulation side by side

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[1] Ibid.

[2] "[illegible]" — *Rājavyavahārakośa*, p. 38.

in Shivaji's dominion As has been pointed out already, the *Hūna* or *Varaha* (वराह) was a very common form of gold money, and so was a half-*Hūna* or the *Pratāpa* (प्रताप) The *Dharana* (धरण), the *Cumala* (चमल) and the *Durala* (दुरल) are fractions of the *Hūna* and are found in our papers used more for purposes of accounts than as coined money, and it appears certain that there were no actual coins of those denominations.[1] Murāra Jagadeva, the famous Brahmin Minister of Bijapur, performed religious ceremonies at the holy confluence of the rivers Bhima and Indrāyani at Nāgargāva in Poona District, (later called Tulāpur), and among these the *Suvarṇatulā*, and made a gift of the land in the village to Brahmins. In the Dānapatra, the land so given away is described as "गावत्रय वराह परिमित," showing thereby that the government revenue of those lands was 300 वराह or *Hūnas*. In the Maharashtra of Shivaji's epoch, a variety of coins was in circulation as the country touched the jurisdiction of the Moguls, the kingdoms of Bijapur and Golkonda, the Hindu rulers of Southern India, the Portuguese and the English, at various points. As a matter of fact, the *Hūnas* were known as *Pādshāhi Hūnas*, though several varieties are specified, and the rupees and the other forms of currency were exchanged at their bullion value The Mahratta word *Ṭaká* is obviously derived from Sanskrit *Ṭaṅka* (टंक) which occurs in *Ṭaṅkaśālā* or mint. *Ṭaṅka* appears to have been used for coined money generally, and the old rulers of India must have struck *Ṭaṅkas* out of silver, gold and copper The *Mudagāva* stone inscription of the early part of the fourteenth century of the Śaka Era, mentions silver *Ṭaṅkas* (टंक) and copper

[1] The *Mohor* (मोहोर) is not used as money but as bullion

[2] "महाराष्ट्र" Edited by Mr Vidi, p. 18

dramas.[1] From English Factory Records we learn that the king of Bijapur had no silver rupee struck in his mints, that the English pice circulated in the dominions of Shivaji, that the latter would not mind his subjects using the coins of the British East India Company if they were as fine as the Mogul ones and that in any event he would not bind himself in this matter to any reciprocal obligation.[2] There is positive proof to establish the fact that 10 to 12 *Tukās* went to make a *Hun* and that 3 to 4 of them were equivalent to a rupee and that 3 to 4 rupees had the same value as a *Hun*, and these relations are in perfect accord with the values of the three metals which are on record. But the question that has to be answered here is whether the *Tukā* was a coin and whether it was made of silver or copper. The *Tukās* are generally described specifically as "Khurdā Tukā" (खुर्दाटके) and the *Rājanyabhidhānakosa* defines *Khurdā*[3] as *Tāmra dravya* (ताम्रद्रव्य)[3] and leaves no doubt that that money has reference to copper coins. *Khurda* would literally indicate small coin or change as it is called in common parlance. But that is no reason why we should assume that the *Khurdā Tukā* was a copper coin. In the first place, a copper coin of the denomination of the *Tukā* would weigh about 15 tolas, and it is not difficult to imagine how heavy and inconvenient such money would be. It would not be a coin but merely a stamped lump of metal. No wonder this curiosity has not been yet discovered. Nor has a silver *Tukā* been found and there is no evidence in our papers to establish the existence of one. On the contrary, there is evidence to support Raghunath Pandit's description

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[1] [illegible]

[2] English Records on Shivaji II, p 24 (Published by the [illegible], पुणे) t

[3] "खुर्दा तु ताम्रद्रव्यं स्यात्".

of *Khurdā* as consisting of copper pieces. Such terminology is in every-day use in Maharashtra even at the present moment, and *Khurdā* is always meant to refer to copper coins and to exclude silver pieces. It may indeed be plausibly argued that the amounts of the *Khurda Ṭakā* run into four figures in the accounts of the seventeenth century and that this would not happen if the *Ṭakā* were not a real coin. The *Ruka* is admittedly a small copper coin, and as it constitutes subsidiary money, it is used only up to the figure 48, as 48 *Rukās* go to make a *Ṭakā*. When the revenue of a village, the argument may run, is shown as a thousand and odd *Ṭakās*, it appears to be reasonable to suppose that the *Ṭakā* may be a subsidiary and fractional coin but it cannot be nominal money. What we have to suggest, however, is that the *Khurdā Ṭaka* of our papers is a money of account, probably the memory or the shadow of an old silver coin of about a fourth or a fifth of a rupee, and that no coin of that denomination, either of copper or silver, actually existed and circulated in Shivaji's Maharashtra. The *Ṭakā* represents a certain weight of copper, consisting of coins like the *Rukā*, the *Pice* and the *Dām*, and its value, expressed in terms of silver and gold, varies with the market price of about 16 tolas of copper, the weight of 48 *Rukās*. In daily reports of market-prices of certain towns, which have been found, the price relation is shown as "खुर्दा नव होनास" or "खुर्दा रुपयास,"[1] which means so much weight of copper coin expressed in *Ṭakās*, for one *Hūna* or for one rupee. When the subsidiary copper coin which constitutes the *Khurdā*, is to be distinguished, it is specifically mentioned by name as "रुपया खुर्दा मजनगिरी २८"[2] In government

[1] "शिवचरित्र दीप" p. 109.

[2] "खुर्दा रुपया" आणि पहिला, p. 17

revenue accounts, the total receipts are split up and shown under the three heads of *Hūns*, Rupees and *Khardā Tukā*. To give an illustration. Suppose the total amount of the receipts in a कसबा or a market town are Rs 1,000. The amount is probably collected in the shape of coins of gold, silver and copper, and the account will stand as under:—

100 *Hūns* at Rs. 3½ per *Hūn*	.	Rs. 350
250 Rupees	...	Rs. 250
1100 *Khardā Tukā* at 3½ *Tukās* per rupee		Rs. 400
Total	..	Rs 1,000

In certain papers in the Peshwas' Daftar at Poona, I have seen, relating to the account of the *Jamābandī* of the *Mukhtarfā* or municipal taxes on trade, crafts and professions, etc., of a township in the Satara district, the *Hūns* is distinguished as "नाथे होन" from "खुर्दा टके." We give below the actual *Jamābandī* of *Kasba Wai* for the year 1118 Fasli (1702 A.D.)

Rs 751 10-0	..	*Nāve Hūns* 214 11 at Rs. 3½ per *Hūn*
Rs. 278-8-0		*Khardā Tukā* 905 at 3¼ per rupee
Rs. 112 8-0	..	Rupees in cash
Rs. 862-7-0	...	Grain, converted into rupees.
Rs. 2,015-3-0		

There is nothing extraordinary in the peculiarities of the *Tukā* we have so far described. The currency history of other countries furnishes similar instances of money of account. When a quantity of small pieces of copper accumulated, it had to be evaluated in terms of money of higher denomination, and this was an important part of the duties of the persons charged with the keeping of accounts.[1]

[1] अंबेल खानगांव आहे) हाल मजूरी खुर्दा जमा झाल ॥ खुर्दाचे [illegible]) [illegible] आहे [illegible] ॥ —A Mustak (मस्तक) वार्षिक पुस्तिका, सन १८३८

That the *Rukā* and the *Pirsā* were copper coins, is undisputed. And the *Tiruka* (तिरुका) and the *Sasagāni* (ससगाणी) were most probably coins. The *Rukā* is often described in our papers as "*Tānkasāli Rukā*" (टांकसाळी रुका), coined piece. The *Tirukā* or three *Rukās* appears to have weighed 9 *Māsas* or $\frac{9}{8}$th of a tola, and the *Sasagāni* was equal to 6 *Rukās* or the double pice, the *Dāma* or *Dhabu*. The *Alampiri Ṭakā* which has been referred to above, was obviously the *Dāma* or double pice. The fact that the *Ṭakā* has been described, in rare instances, as a *Tankasāli Ṭakā*, need not mislead one into thinking that this description shows that the *Ṭaka* was a coin. In these places the meaning is that the *Ṭaka* was made up of small copper coins. This is evident from the explanation given in the paper itself where that terminology occurs, and it is —"दोन सससाणी टके १८६ वेळटका ला टके" and "सससाणी ओ टोळ १८६ असे स सणाणि," that is, in coin, nine *Sasagānis* = 1½ *Ṭakas*.

The *Ṭakā* is found in our papers occasionally used in the sense of a money of higher as well as lower denomination than the "*Khurdā Ṭaka*" or a third or a fourth of a rupee. It is on no very certain ground that we tread here, and have to resort, more or less, to guess work. But even then there is available some suggestive evidence that is calculated to afford sufficient firm ground. Thus the "*Sikki*" or "*Nizāmsāhi*" *Ṭakā* may be the rupee. Some side-light is thrown on this question by the record of current prices, expressed in terms of the *Ṭaka* and the *Khurdā Ṭakā*. Prices, of course, varied from time to time and place to place, but it is not impossible to ascertain something like an average price for a given period and a given tract. We have prices given in different papers in terms of rupees, *Ṭakās* and *Khurda Ṭakās*, and these are comparable. We cannot go into the detailed calculations in this place, but it should suffice if it is pointed

out that when the average price of grain in a certain period and in a certain tract, is given as 10 to 11 *Ṭukās* and also as 10 to 11 rupees per *Khaṇḍi*, the *Ṭukā* is nothing but the rupee, being used in the general sense of coined money. Reference may be made to *Śivacarita Sāhitya*, Vol. 2, where the items under discussion are given as follows: "दरखंडीस टके ११=॥", "गहाजोरी बगैरे खंडी १४ दर रुपये १=" and "टके १३। गहा ३॥ २॥ दर १० मेहुन"[1]. In an order issued by Mirza Raja Jayasing in Śaka 1586, mention is made of the grant of a *Ṭukā Śāhi* annually which, it will be reasonable to infer, probably refers to a rupee.[2] In a paper of the year 1719 A.D., the revenue assessment of the village Gīra (गीर) near Daund in Poona district, is stated to be *Śāhi Ṭukās* 1350, and the actual words there are "साडे तेराशे शिवाजराही"[3]. What is this "*Niẓāmśāhi Ṭakā*"? Is it different from the *Khudā Ṭukā* and is it equivalent to a rupee? Without more information about the village, it will not be safe to draw a definite conclusion. If we may venture a guess, however, the 1350 *Śāhi Ṭakās* should be rupees, in view of the size of the village, which is 27 *Chahure*, and the rise in prices since the downfall of the *Niẓāmśāhi*.

V. G. KALE

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[1] Pages 101, 128 and 210.

[2] "शिवचरित्रप्रदीप," pp. 194—196.

[3] सनदापत्रें," p. 90.

THE GIFTS OF THE GANGES: A GEOGRAPHICAL STUDY OF POPULATION GROUPS

Man in many parts of the world is a slave of the environment. Nowhere, however, is the grip of the environment over him greater than in the Ganges valley. Population, moving along the course of the mighty river, has here been stabilised for centuries in relation to climate and earth factors. Throughout this ancient area of human concentration, the age long adjustment of crops and farming practices to climate and soil and of human numbers to both physical and agricultural conditions is seen on a scale and in detail unparalleled elsewhere. The Ganges valley is divisible into certain ecological areas corresponding to agricultural regions where the climate, soil and water-supply govern not merely cropping and agricultural practice but also the pressure of population. Thus the contrasts in agriculture and distribution of population in different parts of the valley are chiefly the result of natural factors an analysis of which would yield interesting conclusions in social geography.

In the upper Ganges plain we have a continental climate of a pronounced character, hot summer alternating with winter cold. There is a clearly defined alternation of rainy and dry season As we move eastward both the length of the rainy season and amount of rainfall diminish The annual precipitation varies from 25 to 30 inches and is much more unevenly distributed than in the eastern portion of the plain. There are two contrasted agricultural seasons, *Kharif* and *Rabi*. In the *Rabi* the wheat and

barley dominate depending mainly upon canal irrigation. The mean "rain factor" here is 35. It is a meteorological peculiarity of the Ganges Doab that more than any other part of India, with the sole exception of the arid tract further west, it is peculiarly subject to vicissitudes of rainfall. Thus the least deviation of the monsoon would first register its effects upon this portion of the plain, whatever may be the fate of other portions. This region has also the world's greatest canal system, which is responsible for altering the whole character of its cropping and distribution of population. Canal irrigation has reached its limits, and the growth of agricultural prosperity has now been eclipsed by the progress of agriculture in the eastern districts with superior advantages of rainfall and well irrigation coupled with an arranged succession of leguminous crops with rice. Strong, hot and intensely dry winds blow from the west with great persistence during summer, and traverse the entire plain up to the boundaries of Bengal. These have a marked effect on the summer vegetation, which becomes less prominent as we move towards damper conditions in the east. Another effect of the strong winds from the west is the increase of loose and sandy waste, which has been experienced especially in the south-western districts.

In the middle plain (central) wheat and barley diminish in importance. Dominance of the rice crop follows a rainfall between 40 and 50 inches and accompanies higher rural density than the mean. Agricultural certainty is yet ensured by the wheat and barley crop based on *jhil*, tank or well-irrigation. The latter is much easier and cheaper than in the upper plain due to the higher water level and has now reached a limit in some of these rice districts. This region, indeed, exhibits the most phenomenal expansion of the well-system in the world. But a slight fluctuation in the amount and character of

rainfall leads to shrinkages of the normal *Kharif* area, and reacts unfavourably upon the general condition of the peasant. Well irrigation is of little avail for the protection of *Kharif* in case of a bad monsoon. This is rare but when it occurs even the *Rabi* is endangered as the land cannot be tilled exposing the region to famine conditions.

In the middle plain (eastern including Bihar) the climate is damper than that in the middle plain, central portion, especially in the eastern districts and to a certain extent transitional between the climate of the upper plain and that of Bengal. An earlier monsoon gives three instead of two seasonal crops. The rainfall in winter is less than on the plain farther west. In North Bihar the average rainfall is 53 and in South Bihar 45 inches. Dominance of rice crop accompanies lower rural density than the normal. Rice is of two varieties, early and winter. The dominance of the latter implies greater insecurity and risk from famine. *Rabi* crops here co-exist with greater agricultural security or immunity from famines and larger density of population than the normal.

The *Rabi* crop differs, however, materially from that in the westerly regions. Wheat is of far less importance. *Khesari* which is responsible for much of the *Rabi* acreage is principally grown as a second crop after rice. Well-and tank-irrigation are far less developed than in the United Provinces. Agricultural prosperity is bound up not with the rice harvest which like the *Kharif* in the United Provinces cannot be saved by irrigation in case of a bad monsoon, but with the *Rabi* crop. As in the United Provinces, the *Rabi* depends upon irrigation. Here private canals, tanks, wells and *Jhils* are far more important than the Government canals.

The climate of the deltas is characterised by unvarying warmth in conjunction with a uniform damp atmosphere. Rainfall is abundant, certain and better distributed,

and the temperature is more equable than in the western part of the plain. There is a direct correspondence between the double-cropped area and the population density, but the influence of rainfall, which is both high and constant, is less evident. Unlike the United Provinces and Bihar, agriculture is not entirely dependent upon local rainfall. Floods play a more important part than rain in the fortune of the wet region crop, rice. The delta rivers with their timely inundations are responsible for an arranged succession of three rice crops along with pulses, jute and vegetables, which is nowhere endangered by an unfavourable monsoon, nor needs the assistance of deep well-irrigation.

In western and central portion of the delta, however, alluvial formation has been completed and the rivers have ceased to be active. Here crops, never so abundant, depend mainly, as in the more westerly portion of the valley, on the amount and distribution of local rainfall.

The above survey of climatic and agricultural conditions gives us the following ecologic conclusions which govern the distribution of population :—

1. In the western and upper part of the plain the limiting factor in agriculture is represented by a rainfall of 30 inches and an index of aridity of 20. Such an index is arrived at by dividing the annual precipitation (in millimeter) by the mean annual temperature in degrees centigrade plus 10. (This may also be represented as a monsoon factor of 35 arrived at by dividing the rainfall in millimeters by temperature centigrades.) According to Professor Martonne to whom we owe the making of such indices, indices of aridity about 10 correspond with the dry steppes, those of 20 more or less to the prairies, above 30 forest vegetation tends to dominate. Irrigation under such conditions fails to have any effect upon density. Irrigation below a limit of 25 per cent of the gross cultivated

area ceases to be a factor at all in determining agricultural productivity and rural density.

Districts	Rainfall	Irrigation (Percentage of gross cultivated area which is irrigated.)	Double cropping (Percentage of area cropped more than once to cultivable area).	Density
Banda ...	37·95	5·4	7·3	206
Banda ...	43·9	6·9	3·5	595
Hamirpur	35·81	7·5	4·6	192
Jhansi	34·3	10·2	6·9	166
Jalaun ...	39·0	12·9	6·0	261

Here low density co-exists with small irrigation facilities even though the rainfall is not deficient. Irrigation above the limit of 40 per cent fails to produce its effects upon density unless the rainfall exceeds more than 30 inches.

Districts.	Rainfall.	Irrigation	Double cropping	Density
Aligarh ..	25·08	43·1	18·6	545
Bulandshahr ..	25·86	45·4	24·7	560
Etah	27·49	41·3	16·9	482
Meerut ...	28·12	47·7	18·8	652
Mainpuri ...	29·84	50·6	8·9	446

Here density is relatively low though irrigation facilities are not deficient

Lastly, mere amount of average rainfall, even above a limit of 40 inches without the aid of irrigation fails to contribute to high density

Districts.	Rainfall	Irrigation.	Double cropping	Density
Benares .	39·6	31·1	22·4	898
Ballia ...	41·1	28·5	23·8	679
Azamgarh .	41·1	45·0	20·1	690
Bijnor	43·9	6·8	5·5	395
Bahraich ...	43·6	7·1	7·1	402

High rural density exists in districts where rainfall is above 30 inches and where the irrigated area is high, *i.e.*, at least above 40 per cent of the gross cultivated area

District arranged in the order of density.	Rainfall.	Irrigation	Double cropping.	Density
Benares	39 6	31 1	22 4	898 (704)
Jaunpur	41 8	45 5	21 1	745
Gorakhpur	48 3	26 0	22 7	721 (690)
Basti	48 0	35 1	26 8	687
Bahraich	41 1	28 3	24	679
Fyzabad	40 06	40 0	26 4	676
Meerut	28 08	47 7	18 3	652
Bulandshahr	26 00	45 4	24 7	560
Aligarh	25 00	48 1	18 6	545
Agra	25	25 2	7	498
Cawnpore	32	35 3	14	435
Budaon	32 8	10 1	14	434
Mathura	23 4	35 7	7 2	427

2 Throughout the United Provinces it is both rainfall and irrigation, which together govern primarily the proportion of cultivated area, and secondarily the density of rural population.

3 This part of the plain is more susceptible to the fluctuations of the monsoon, which have violent reactions especially upon the *Kharif* area. Most canals are for *Rabi* works and though the *Kharif* areas are even better protected by wells the least disturbance of the amount and character of rainfall spells conditions of shrinkage of cropped area and scarcity

4. As we come to Bihar, the rainfall averages 49 inches as compared with 34 inches of the United Provinces. The early summer crop like the *Kharif* in United Provinces is subjected to similar fluctuations. As in the United Provinces immunity from famines depends in like manner upon the acreage under *Rabi*, which also has a

direct positive correlation with rural density. The United Provinces mainly depend upon canals and Bihar upon wells for the *Rabi* crops. But Bihar though favoured with higher average and more evenly distributed rainfall is less adequately protected by canals, and her well construction also falls much below the limit reached by the United Provinces especially in the eastern districts. Thus the Tirhut division, which resembles the eastern districts of the United Provinces in its dependence for rice upon early monsoon, is one of the worst famine areas in India.

5. In Bengal the rainfall averages 76.54 inches But the early rainfall is not certain. Hence density increases with less dependence upon the summer rice crop *Aus*, whose success depends upon a favourable early rainfall.

6. The delta may be divided into moribund and active upper and lower portions. The great delta of the Ganges and the Brahmaputra has moved gradually to the east. The movement of the Ganges eastward is probably due to the denudation of trees in the hill slopes to north and west which caused an early silting up of old channels, and also floods. Barind, North Bengal, and Rarh, Western Bengal, were settled and populated much earlier Throughout a large portion of the Bengal delta the process of land-formation has ended and rivers have not only ceased to enrich the land with annual deposits of silt but actually bring about disease by becoming stagnant and choked with vegetation. When the Ganges, probably in the sixteenth century, quitting the Bhagirathi once started eastward, it may in time have successively found its main outlet through the channels of the Jalangi, Mathabhanga Kumar or Nobogunga and Gorai, but its advance was continually farther east, leaving the off-takes to the west to dwindle and decay It was through these five connecting links that the water of the Ganges, spreading over the delta,

has already raised it. The process on the western side and in the centre is now more or less an accomplished fact; on the east it is in rapid progress.[1] Thus in central and western Bengal, such districts as those of Murshidabad, Nadia, Jessore and the Twenty-four Parganas have for the most part been raised above the level of periodical inundation by silt deposit. In Northern Bengal too the same process is in progress. The rivers have been silting up their beds, the land is water-logged and epidemics of malarial fever have been serious and prolonged. In these areas man is now fighting a losing battle with natural forces of deterioration and disease. Eastern Bengal, on the other hand, forms a portion of the active delta, it is a wide alluvial expanse of open drainage and delta building rivers, while so much of the rest of the province is characterised by a moribund river system and an obstructed drainage. Thus Eastern Bengal is the most populous and most productive portion of the Ganges Valley; it is here that we meet with the most thickly populated rural areas in the whole world. As we move further and further towards the Bay, the soil fertility increases due to the inundations from three river systems. The difference in soil types as represented by the old and the new alluvium and the remoteness or nearness from the active silt-laden rivers for the most part accounts for the difference between the agricultural depression in Central and Western Bengal and the prosperity in Eastern Bengal. In East Bengal, not merely is the tract enriched by the detritus from three different river systems, but the average rainfall becomes heavier as we descend along the courses of the rivers. Thus, both the double-cropped area and the area under *Aman* increase and co-exist with greater rural density. Practically, the whole of

[1] *Vide* Report of the Drainage Committee of Bengal, 1907.

the arable land in the districts of Bakarganj and Noakhali, for instance, is in winter one smiling field of *Aman* paddy; in these districts, again, the wealth derived from orchards such as those of coconut, areca nut, etc., which grow most successfully in a high sandy soil, rich in salt, also contributes to high rural density, as in Cochin and Travancore.

7. The early summer crop is most uncertain under monsoon conditions. The dominance of this throughout the entire area of the Gangetic plain spells agricultural insecurity. The winter crop is governed by canal irrigation in the western portion, by well-irrigation in the middle portion of the plain and by flood irrigation in the deltas. Difference of mean temperature in different agricultural seasons diminishes as we move from the continent to the sea. The contrasts of cropping due to temperature and rainfall conditions gradually disappear, and we finally come across an elaborately arranged succession of croppings, which is responsible for phenomenal agricultural productivity leading to the world's highest records of rural density.

8. The maturity of the plain leaves its impress upon both the nature and the rotation of crops. The old alluvial soils naturally have to depend upon the artificial supply of manures to maintain their fertility, while the new alluvial soils are periodically replenished by silt deposits from the overflowing rivers. Given artificial manuring and irrigation, the standard of farming is, generally speaking, much higher and the cropping more variegated in the old alluvium than in the new. As we approach the delta fringes manure plays a decreasing rôle in farming till we reach areas where the value of any given field is determined not so much by the soil but by the depth of the water which stands on it during the rainy season. Secondly in the tract covered by the new alluvium, the periodical deposits of river silt

maintain a perfectly level surface adapted for rice cultivation. The surface of the old alluvium, on the other hand, is broken by the corroding action of the rivers and of surface drainage, and the level of the country rises and falls in parallel waves at right angles to the watershed, the crest of each wave lying between two rivers. Rice cultivation here is carried on by building an elaborate system of low embankments or small terraces which hold up the rain water for irrigation. Where this is impossible or uneconomical, wheat, gram and millets supersede rice. Thirdly, even in the delta the distinction between the old and the new alluvial soils is discernible. In less recent alluvial areas in Bengal the land surface is uneven and broken by ridges.

Large bunds or tanks made on the slopes of undulating country to hold water for rice irrigation were as numerous in the past in Western Bengal as these are to-day in Agra or Bundelkhand. Here also the problem of soil-erosion due to the destruction of widespread Sal forests, with its concomitants of increase of aridity and floods, has arisen. Due to soil-erosion in wide areas in Western Bengal, water which should have percolated gradually through the soil of the upper slopes is no longer available, and thus on account of lack of sufficient moisture the rice crops in the lower slopes suffer. Moreover, floods recur more often causing serious damage in the lower reaches of the rivers. It would appear that on account of rapid expansion of population in the middle and upper Ganges valley the Bengal delta has become crowded prematurely. Many of the remedial measures which are now proposed seek to remedy the natural effects of human expansion in the jungle near the source of the rivers as well as natural interference with the wayward and devastating action of the deltaic rivers. Thus as population multiplies and ascends the plateaux and hill-slopes

deforestation proceeds and protective measures are called for so as to prevent or retard floods. As it intrudes upon the Sundarbans, the jungle which formerly had acted as an effective barrier against destructive sea-waves is cut down leaving man and his village entirely at the mercy of storms. Lastly, a systematic flood and flush process, *bonificazione*, is recommended, as in Italy, in areas where the conditions are now such that left to itself the river will spill over the banks even in moderate floods. This system has been recommended for a very large area in Midnapore, as also some areas in Burdwan and Hughly districts.[1] The destruction of the Sal forest, soil-erosion as well as construction of embankments have all contributed to upset the hydrographical equilibrium, and this has reacted unfavourably especially on Western Bengal. By the sixteenth century Western Bengal had already possessed a dense population and there has been since an enormous expansion of population. This has made the process of an artificial interference with the river system of the delta inevitable leaving the legacy of decline of fertility, water-logging, decline of rivers, fever, etc.

What rainfall is best suited to the conditions of agriculture in the wet and dry low latitudes climate, where an aquatic plant like rice has been adapted in its innumerable varieties to the conditions of moderate and excessive rainfall, raises a very interesting problem. We take first the eastern deltaic region where rainfall is heaviest and rice is mostly grown as the mainstay of an abnormally dense population.

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[1] Royal Commission of Agriculture in India, Evidence, Vol. IV, p. 82.

Districts arranged in the order of diminishing rainfall.	Density.	Rainfall.	Percentage of cultivable area.	
			Net cultivated.	Double cropped
Jalpaiguri ..	319	142	61·5	10·3
Noakhali	972	114	87·0	31·9
Chittagong	645	113	85·2	8·2
Bakarganj .	752	89	88·5	14·7
Mymensingh	776	88	86·5	26·2
Rangpur	770	80	72·7	5·2
Dacca .	1,148	75	94·1	20·1
Faridpur ...	947	73	97·9	11·8
Dinajpur	432	71	63·0	5
Bogra .	760	66	61·7	32·7
24-Parganas ...	541	63	59·7	10·1
Murshidabad ..	595	55	44·5	15·2
Nadia	535	55	44·7	17·1

The conditions are complicated by the fact that it is in the inundated alluvial tracts that we find a heavy rainfall. It appears, however that a rainfall above 120 inches may be considered as excessive under the conditions of wet-crop cultivation in the region of the Ganges delta. An average precipitation of 70 inches to 90 inches and high relative humidity during the rainy season are here most favourable for the cultivation of rice and jute. A rainfall below 70 inches is accompanied by a relative diminution of the area under cultivation and under more than one crop and hence of rural density. In the region of the upper Ganges plain rainfall will be considered insufficient when it falls below 30 inches. A deficiency below this limit cannot be compensated by irrigation however extended it might be.

We proceed to classify the ecological areas of the Gangetic plain and show their relation to the proportion of cropped area and the distribution of rural density. Each ecological area has, for a given state of the arts of

agriculture, a more or less definite population capacity and also what Aurousseau has called an "expansion ratio," i.e., the percentage which the present population bears to the maximum population that the ecological area can support. It is taken for granted that the standard of living also remains the same, however that might be expressed.[1] It is only in the active deltaic region of the Ganges valley that at present the "expansion ratio" is positive. In the other four ecological areas the index shows the degree to which the population capacity has already been over-stepped. Optimum density would represent the index at which the area may support the density under "optimum conditions," however these might be expressed. The table is supported not only by *a priori* probability but also by a wide range of agricultural data such as rainfall, irrigation, cropping, etc., as well as vital statistics.[2]

Ecological Areas in the Ganges Plain.

Warm Temperate Climate. / Wet and Dry Low Lat. Soils.	Recurrent Rainfall	Occasional Rainfall	Insufficient Rainfall	Average Temperature.	Percentage of gross cultivated area	Maximum density of population per sq. mile	Optimum density	Expansion ratio.
	Inches	Inches	Inches					
The Upper Ganges Plain (Western)	60	40	30	78°F	100	500	200	400
The Middle Ganges Plain (Central)	70	50	40	79°F	90	400	200	300
The Middle Ganges Plain Eastern (including S. Bar)	70	50	40	80°F	110	650	300	400
Mudland Delta	100	60	50	81°F	80	850	800	800
Active Delta	100	80		82°F	120	925	1000	2000

[1] M. Aurousseau, *Geographical Review*, XIII, April 1923.

[2] A. B. Wolfe, "The Population Problem," Ibid., December 1923.

The above may be contrasted with the following scale, which is related mainly to the conditions of cultivation of the cereal foods of Western civilisation and is based on studies of the distribution of cultivated land.[1]

	Rainfall	
	Excessive.	Insufficient.
Cool temperate lands ..	40 inches	8 inches
Warm temperate lands	60 "	12 "
Hot temperate lands ..	80 "	16 "

We give below a table which shows the distribution of the world's rainfall.

	Under 20 inches	20-40 inches.	Over 40 inches.
Africa ...	54 per cent largely hot ..	18 per cent	28 per cent
Asia	67 per cent largely cool ..	18 "	15 "
North America	52 per cent	30 " ..	18 " ..
Europe	47 "	49 "	4 "
South America	16 " ..	8 "	7 "

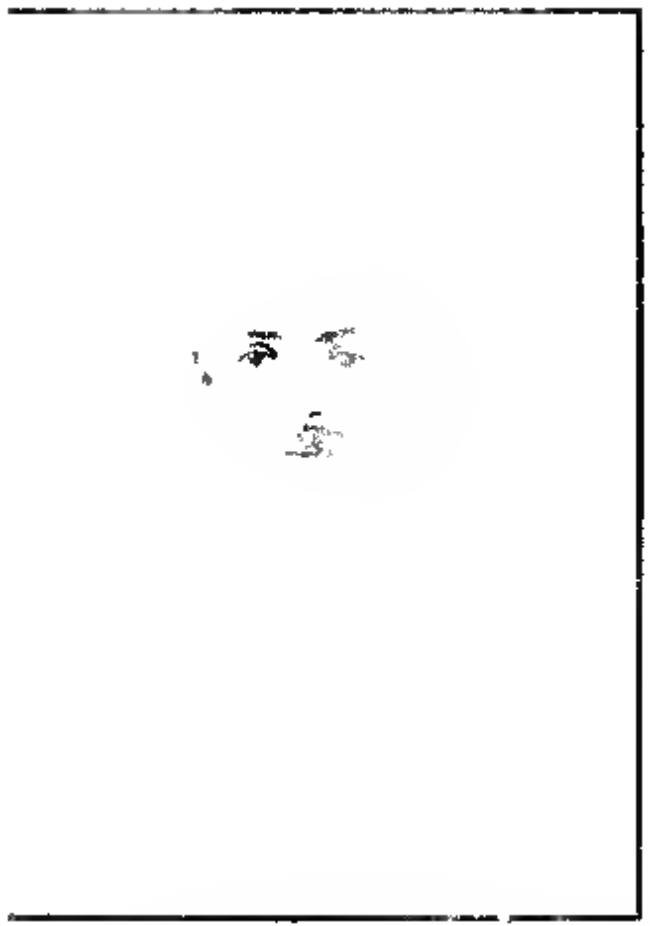
CLIMATE

Warm temperate	Rainfall					
Low Latitude	Region	Excessive	Insufficient	Indoor Activity	Mean annual Range of Temperature	Density
Desert	The Great Indian Desert	40"	16"	8 to 10	90° F	2-50
Monsoon	The Gangetic Plain and Highland		10"	10 to 14	80° F	100-150

RADHAKAMAL MUKERJEE

[1] Fawcett On the Distribution of Population Over the Land, *The Sociological Review*, April 1925

Section III—Religion & Philosophy



PANDIT MADAN MOHAN MALAVIYA
Age 50

ITUITION IN KANT'S PHILOSOPHY OF RELIGION

t as generally regarded as an advocate of rationalism
rn Philosophy. His fundamental aim was to lead
y into the safe road of science He inquired into
ility of philosophy as a science with the intention
lating its conditions. In the actual development of
ophy, however, we see how Kant is obliged to sur-
extreme rationalism and resort to truths known by
In this paper I shall endeavour to discuss some
f Kant's philosophy of religion with a view to exhi-
intuitional character.

KANT

t's chief contribution to the philosophy of religion
stence on the logical indemonstrability of God In
que of Pure Reason, he shows that the arguments
l for proving the existence of God are defective and
ontradictions Our capacities of knowledge are
the phenomenal world and if we extend the princi-
ace and time experience to regions beyond it, we are
into what he calls "the illusions of the understand
or our categories are useless until the material is fur-
sense, and sense can never supply material adequate
quirements of the principles of speculative reason
ot an object of perception or of inference and if he
being must be apprehended in some way other than
ch holds for the finite world. But unfortunately
l not discuss the question of the possibility of a
mode of apprehension for the world in its nonspatial
oral character, though there are valuable suggestions,
in his treatment of the Ideas of Reason, the moral
and the teleological judgment.
categories of the understanding like causality and
give us only partial unities but the mind of man is

haunted by the ideals of a completely integrated whole of experience. It seeks to bring the whole that is experienced, whether as subject or object or as a union of both, into a form in which it could be grasped as one. Kant called the Ideas, after Plato, Ideas of Reason. There are three Ideas of Reason—Soul, world in its entirety and God. They cannot be construed as objects of experience though they have a regulative use. They help us to organise our experience and estimate its worth. They prescribe the problems which the understanding is called upon to solve in its search for knowledge. They are at the same time limiting concepts. They do not represent the nature of reality, for the Ideas cannot receive empirical verification, for everything empirical is conditioned and relative, and the Ideas are unconditioned and absolute. If we ask how such ideas arise at all, since they are in conflict with the content of experience, Kant answers that the understanding frames these ideas by removing the conditions under which objects are known in experience. The Ideas express the demands of the understanding, the subjective interests which inspire the work of understanding in organising the contingent facts of experience into a unified system. Their sole function is to regulate the work of understanding and they have no metaphysical significance. Science in the last analysis rests on a faith and a hope, the faith of reason in its own supremacy, the hope in the rationality of the world.

Kant conceives of reason as the faculty by which we learn about ultimate or unconditioned principles. In the matter of cognitive experience, these principles do not give us valid knowledge, since man has to depend on sense for the matter of knowledge and the matter actually supplied is not adequate to the requirements of the principles of reason. But reason in its practical capacity is in a better position. A command can be valid, even though it is not actualised in the world of space and time. So there is no inherent defect in the unconditional validity of the principles of practical reason. A deeper meaning to the Ideas of Reason is given by moral

life. The fact of duty is an illustration of the kind of reality to which the Ideas of reason point, a reality which although it has a definite content, is in no sense an object in the context of experience. We have an intuitive recognition of moral law as good in itself, not because it is commanded by a superior or is felt to be conducive to our happiness. The unconditioned principles are admitted to be valid in the sphere of practical reason, even though they have not received any fulfilment in the world of space-time. Kant is fully alive to the fact that the kind of apprehension we have in the mathematical and physical sciences is not all. The moral consciousness is the point where we touch absolute reality. Conscience is the call of reality within the individual mind. The intuitive apprehension of the moral law is quite different from the logical apprehension of any object in the space-time scheme.

It is interesting to find that Kant actually assigns to reason in its practical aspect not merely the abstract principle of all morality, orderliness or regulation, but also the more concrete principles of conduct. In the sphere of pure reason, Kant always insisted that the matter of experience was no less necessary to knowledge than form. But he believes that in the sphere of practical reason, the bare, abstract formula of reason, the categorical imperative is sufficient by itself to determine the whole duty of man without any reference to the specific desires of human beings. We know our duty, according to Kant, by means of rational intuition and not by an intellectual calculation of results. But as a matter of fact, Kant is not quite consistent. The mere criterion of self-consistency, which is all that the categorical imperative amounts to in practice, is incapable of guiding us in life. There is nothing theoretically inconsistent in willing universal destruction. If Kant thinks suicide to be wrong, it is not because of its violation of the formal principle of the categorical imperative but because of its incompatibility with certain ends with which the will is identified. These ends are not the casual desires of the individuals, which are contingent in

character but the supreme ends of humanity. Clearly then, Kant admits that not merely general principles of morality but the specific duties are known by rational intuition

One would have expected Kant to have developed the implications of this mode of apprehension and applied it to the knowledge of God but he did not do so. God is left in a precarious position, as a postulate of the moral consciousness; God remains an ideal to be used instead of a reality to be apprehended or a person to be worshipped. God is a regulative conception and not an object of scientific understanding or of possible experience. Our knowledge of reality does not give us religious truth. Moral consciousness tells us of the practical indispensableness of certain values and we have no means of knowing whether there is any real object possessing these values. If we assume God to be real it is only a case of wish fulfilment, however much the belief may be justified in view of the contingency of phenomena, the appearance of design in nature and the consciousness of the moral law

In the *Critique of Judgement*, Kant urges that beliefs are sometimes grounded on the necessities of feeling. Our feelings also involve knowledge or discernment to some extent. Our feeling of the fit and the worthful in nature is a dim recognition of some ultimate background which we might term God. But he suggests that a higher type of mind might possess an intuitive knowledge which would render the teleological judgment superfluous. These three lines of reflection in Kant, Ideas of Reason, the forms of moral life and the notion of adaptation confirm the view that reason is in Kant another name for the deeper rationality or intuition Kant is convinced of the reality of God for we have besides theoretical reason working through categories, another source of apprehension which Kant traces to moral consciousness We have not only an *a priori* consciousness of good and evil,

[1]Schelling used the Kantian suggestion that our aesthetic sense may contain a perception of the ultimate truth of things and art may be the organon of philosophy

but also that of the unconditioned. They issue from the soul's own deepest source of knowledge

Reason, theoretical and practical, nay, our whole nature constrains us. If we do not believe in God, we will be proving false to the deepest in us. Kant proves that God is the reality with which the mind of man at its deepest is in communion though no object is present in phenomenal experience adequate to it. The self-evidencing and underivative character of intuitions is the lesson of Kant's philosophy, though he was himself not conscious of it. Kant thinks that intuitive understanding is a prerogative of God and not a possession of the human spirit Such a misconception is traceable to the arbitrary limits he imposed on human knowledge. For him it is always conditioned by the senses apart from which we have no faculty of intuition or direct perception. Our perceptions are always sensible and our understanding deals with general notions and is not therefore intuitive. Kant conceives the possibility of an intuitive understanding. In his *Dissertation* he says, "The intuitive power of our mind is always passive; and is only possible so far as some object can affect our senses But the intuitive power of God, which is not the effects of objects but their cause, since it is independent of them, is their archetype and hence is completely intellectual"* If Kant denied this privilege of intuitive understanding to man, it is due to his intellectualism which is a sheer misfortune. Though he draws a distinction between theoretical and practical reason, even the latter is for him intellectual. Virtue is not virtue, if it is accompanied by a thrill for the act. He arbitrarily separated thought from feeling and the other sides of man's psychical nature and would not realise that the mind as a whole can know things which are beyond the ken of mere intellect. If we follow the spirit of Kant's work, we will see that it is quite friendly to the hypothesis of intuition as the primary source of our highest knowledge. If we depend on sense data and logical

*Webb *Kant's Philosophy of Religion* (1926) p. 84.

proof, we cannot account for the laws of substance and causation, for experience itself is based on these and has no meaning if they are not presupposed. The method of proof is of no avail since first principles are unprovable.[1] By a critical criticism of reason Kant shows that we possess independent of all experience, i.e., *a priori*, a knowledge of certain first principles. The certainty of mathematics and natural science is due to the contributions made by pure reason. The categories themselves are various forms of the one fundamental idea of the mind, the idea of universal unity and necessity. They are individual determinations of the fundamental knowledge of the necessity and unity of all that is. This knowledge is something most immediate and most profound. It is this that is the real basis of Kant's criticism and not what is exhibited as the proof in the transcendental deduction of the categories. The categories are only the extensions of the one fundamental idea of the unity and interconnection of things in the universe. It is because Hume denied any other kind of knowledge than that derived from perception or proof, that his system ended in scepticism, while Kant assumes that, independent of all experience, from ourselves alone, we know the fundamental condition of all being.

Unfortunately, Kant believes that since this knowledge is altogether *a priori*, it is true only of objects as known and not of objects as they are. Things in themselves are known by us only in so far as they 'affect' us. The picture of the universe shaped by the categories has no claim to objectivity. Kant is inconsistent on this point, for the 'ideal' category of causality is applied to the thing in itself where it is conceived as causing our perceptions. He overlooks the natural self-confidence of reason that it knows things as they are in sense perceptions. Unity and interconnection are true of the objective world itself. No scepticism can really shake this conviction. What we know is not an illusion arising from our own subjectivity. It is the appearance for us of things than-

[1] *Critique of Pure Reason*, Second Ed. Introduction.

selves. Only we see them under limitations. Our knowledge is valid though within limits. Unless we become aware of the limitations we cannot correct them.

Again, while Kant tells us that nature is a construction of our minds in the sense that the categories synthesise the multiplicity of sense, he did not ask how our *a priori* forms happen to suit sense-material. Unless both the self with its categories and the non-self of nature have a common source, unless there is unity between our thought and the nature of things, this adaptation is inexplicable.

Kant's view of the Ideas of Reason is somewhat inadequate and defective. While the categories of the understanding are certain *a priori* conceptions without which there could be no experience or knowledge of sensible phenomena, the Ideas of Reason guide and inspire human thought by prescribing to it the goal to which experience must approximate, if it is true to itself. The effort of intellect to systematise knowledge is guided by the Ideas of Reason. There are no objects in the empirical world answering to them; they therefore remain unaccomplished. Yet we are called upon to act as if there were such objects; otherwise our life would come to naught. While the categories of the understanding are necessary, if we are to have any knowledge at all, the Ideas of reason are necessary if our knowledge is to attain a completely systematic character. The Ideas are for Kant not central truths but future possibilities. The difficulties of Kant's system are due to his inadequate perception of the power of the human mind to pass beyond the distinctions of the understanding to the unity that underlies them. The form of understanding with the abstractions they involve may fail to give us the truth of things but it is possible to interpret these 'Ideas' not as Kant does, as regulative principles bereft of any substantiality but as Plato did, as the underlying basis of the whole structure of knowledge, not only constitutive but also productive. The concepts of the understanding may be abstract and partial, but the Ideas may be the reality. We

do not derive the Idea of the unconditioned from the conditioned by the elimination of the conditions, as Kant often suggests, but we start with the unconditioned. All consciousness is consciousness of a whole which precedes and conditions its parts. We cannot be conscious of a limit unless we are conscious of what is beyond the limit. That which is altogether limited or finite cannot know itself as limited or finite. The Idea of the unconditioned is distinct in nature from all other concepts and so cannot be derived from them. It is a pure *a priori* Idea of reason. If Kant regards the world of experience as limited and phenomenal, it is because it falls short of the ideal demands of pure reason. Besides, the Ideas of reason are to some extent realised in the world of experience. The beauty and sublimity of nature and the purposiveness exhibited in living organisms suggest the conformity of nature as a whole to the ends of reason. We are able to judge empirical truth by the standards of reason. If these ideas help us to organise experience and test the value of concepts, if they control and regulate our thought about the world, surely they possess the highest kind of reality and the world of experience which never realises it falls short of it'. If inclusiveness and coherence are substituted for correspondence with an external given object as the test of truth, it is to no small extent due to the understanding of the implications of Kant's theory of the Ideas of Reason. These Ideas of Reason

On this view, Kant is in agreement with Plato's theory of Ideas. As he himself expresses it, "(For Plato) Ideas are the archetypes of all things themselves and not, like the categories, merely keys to possible experiences. In his view they issued from the Supreme Reason and from that source have come to be shared in by human Reason. He very well realised that our faculty of knowledge finds a much higher need than merely to spell out appearances according to a synthetic unity in order to read them as experience. He knew that our Reason naturally awakes itself to forms of knowledge which so far transcend the bounds of experience that no given empirical object can ever coincide with them, but which must none the less be recognised as having their own reality and which are by no means mere fictions of the brain." Norman Kemp Smith: *A commentary to Kant's Critique of Pure Reason*. 2nd Ed. (1923) p. 447.

may be greater realities than the facts obvious to the outer senses and the intellect. Instead of assuming that Ideas are only pale reflections of the forms which they so much exceed, we may take the facts as partial representations of the reality which they reveal. Reason is, for Kant, the faculty by which we become conscious of the ultimate or unconditioned principles. It is different from understanding in the empirical sense. For the empirical understanding, the Ideas of Reason are only ideas, demands for an unconditioned which in Kant's view can never be given, though there is an unceasing effort on the part of thought to reach a fuller comprehension of conditions. But reason is not a faculty co-ordinate with others. It is the whole mind in action, the indivisible root from which all other faculties arise. To say that the Idea of God is a product of reason is to say that it is the outcome of the deepest life in man, the reaction of the whole nature of personality to the nature of the real. God is the answer which the full being of man utters when it presses against the whole nature of personality to the nature of the real.

If the faculty of reason gives us the notion of a world higher than the phenomenal, something that is not the effect of any cause but the ultimate cause of all effects and if it shapes this notion into the Ideas of God, freedom and immortality, it means that these Ideas are worked into the very structure of the mind. They are not subjective fancies or even ethical postulates but the necessary fruits of the mind issuing from its most vital springs. They are not objects of logical knowledge but are intuited certainties. Kant's successors realise that the true or the objective is what thought is compelled to think by its own nature. Whatever we are constrained to think is real. When Hegel said the real is the rational he is taking this important truth. Only his reason is not what Kant meant by it, the faculty which gives the unconditioned principles both theoretical and practical. God is not real, if the real is identified with the actual in space and time but he is real if the real means that which thought is

obliged to assume as the operative principle in all existent mind as well as its objects drawing them together into a satisfying universe. Both God and the moral law belong to the same region of certainty though they are not observed facts. When Kant criticises the proofs of God that the existence of a thing cannot be got from its idea (ontological argument), that necessity can never be derived from the accidental (cosmological argument), that the physico-theological proof retreats on the other two, he means that we cannot *prove* the reality of God. The highest idea is not derived from sense or proved by logic but is founded in the secret places of the soul and its validity is self-established by reason of the soul's trust in itself.

S. RADHAKRISHNAN

THE VEDA AND ITS INTERPRETATIONS

I

The Veda is the oldest book of the Aryans, or rather, as recent linguistic researches have amply shown, of the Aryo-Dravidian race. Moreover, it commands the allegiance not only of the followers of the Brāhmana religion, but even of the founders of the Jaina and Bauddha religions who appealed constantly to the Veda as an authority, and in propagating their reforms argued that the Brāhmanas of their day had ceased to be Brāhmanas and their Veda was nor the original Veda[1], evidently meaning by the latter expression the religious ideas which may be supposed to be the germs from which sprang the religion and philosophy of the Vedānta, that is, the *Siddhānta* of the Veda. In later times even when a particular Hindu creed had sailed far into the open seas cutting off its original moorings, it still carried on its voyage under the flag of the Veda It is, therefore, no exaggeration to say, using the language of Byron in a different context, that "all thoughts", all emotions, "whatever stirs" the Hindu religious mind—and I include in the term Hindu Jaina, Bauddha and Sikh also, which I can legitimately do—"all are but ministers" of Veda and "feed its sacred flame."

The Mīmānsakas distinguish between *Śabda* and virtually *dhvani*: the former, according to them, being eternal, occasionally bursting forth (*Sphota*) in the form of *dhvani* or audible sound. The former some (e.g., the Vedāntins) would regard as *jñāna* (thought) rather than as *Śabda* (sound), but the close association of thought and language is responsible for the Mīmānsaka's use of the term *Śabda*, which has its

[1] Sonadanda Sutta and Tevijja Sutta (Buddhist); Uttarādhyayana, Sect. XXV (Jaina).

analogue in the Greek word Logos[1] and its earliest synonym *Brahman*, a word

The Veda is something *deeper* than the particular arrangement of sounds (śabdānupūrvī) which has descended from generation to generation 'ringing down the grooves of time',—with all those wonderful and elaborate devices for preserving the purity of the original text which are called krama, jaṭā and ghana. That 'Veda' in its original import is not word but thought is borne out by the evidence of the root from which it is derived[2] It comes from the root *vid* —to know, so that Veda=knowledge. Moreover it is obvious that God could not have created the world out of 'sound', as we ordinarily understand the word; he could have created it only out of his 'thought' or 'idea' 'Veda' therefore, clearly means 'thought' or 'idea' It is curious that the word 'idea' also is derived from *Lat Videre* to know, which is allied to *vid* of 'Veda' Even this rendering, Veda=knowledge or thought is not adequate For, Sanskrit *vid* is allied to *Lat Videre*—to see, and therefore properly rendered, 'Veda' means vision[3], and quite appropriately the great men who had this vision were called *ṛṣi* or 'seers' It is plain that God, who is the source of this 'vision' being spirit, his utterance must be spiritual, and not physical. That is to say, God has not spoken to the seers in the manner you speak to me or I to you He, the Supreme Spirit, has spoken to them

[1] Both these terms signify word as well as eternal thought. The Brahman from (√बृह् secondary root from √बृंह् =Lat. Verbum—Germ. Wort).

[2] As late as expounder as Sāyaṇa begins his Bhāṣya with the prayer

यस्य वि चक्षितं वेदा ये वेदेभ्योऽखिलं जगत् ।
निर्ममे तमहं वन्दे विद्यातीर्थमहेश्वरम् ॥

[3] A later synonym of *Veda*, vision, is *Śruti*, hearing. No wonder that the latter word came into use when the vision of Truth had become somewhat dim and the theory of verbal inspiration had made its appearance. But whatever the metaphor whether it be one of light or of sound, or any other, it is after all a figure of speech the revelation being spiritual, Truth being neither light nor sound—but Spirit

spiritually, that is, in the awakeness of their spirit, and not to their external senses. This is what we call 'Inspiration'. Now what could be more sacred than the words in which the Inspiration found its first utterance, its first medium of expression? Hence there is no wonder that the utterance has been treasured as the voice of God by the Hindus[1].

This theory of verbal inspiration has led to a certain extravagance which we may here note. Yaska, the author of the Nirukta, has placed on record the opinion of one Kautsa, according to whom "अनर्थका मन्त्राः"—"*the mantras had no artha.*" Now what is meant by this proposition? Orientalists of the West, and following them some of our Indian scholars also, have understood it in the sense that the Vedic texts conveyed no meaning, and on this they have based a conclusion that by the time of Kautsa, and therefore *a fortiori* that of Yâska, the Veda had become unintelligible, and consequently the date of Yâska must be taken to be far removed from that of the Veda. The proposition regarding the distance of time between the Veda and the Nirukta is in itself sound, but is deduced from a wrong premise. It is a wrong idea that the words of the Veda were unintelligible to Kautsa. For, as Yâska has pointed out the Vedic vocabulary was the same as that used in the current language ("शब्दसमयत्वात्"). This is true, at least, of a large bulk of the Vedic words. Even Kautsa,

[1] Later generations have pictured the Divine Spirit as imparting the Veda to the rṣis in four forms—the Ṛk, Yajus, Sāman and Atharvan—corresponding to the functions of the sacrificial priests who were of four classes, the Hotṛ, the Adhvaryu, the Udgātṛ and the Brahman ("चातुर्होत्रविधिवशात्—the Bhagavata). Surely, these did not flow physically from the four physical mouths of Brahmā. The whole is a picture of art and is to be understood as an artistic truth. So it need not that the pictures which a poet's imagination bodies forth are not less real than our physical world, but only differently real.

Tradition has included in this treasure not the Samhitā only, but also the Brāhmaṇa and the Upaniṣads, wherein we see the recognition of religion as Bhakti, Karma and Jñāna, corresponding to the expression of the human mind as intellect, will and emotion, which constitute the whole man.

[illegible] to Yāska's record, mentions only half a dozen words of the Vedic language which were unintelligible, while thousands could be understood perfectly well. In regard to those which still remain unintelligible, Yāska observes that

"नैष स्थाणोरपराधो यदेनमन्धो न पश्यति ।"

"it is no fault of the post that a blind man does not see it", that is to say, if a word is unintelligible, it does not prove that in reality it has no meaning. The fact of the matter is that Kautsa evidently belonged to that particular school of Yājñikas who had already begun to make a fetish of the Vedic words. According to them, these had a magic value and not a thought-value, so that even though the words were intelligible they were not meant to be interpreted but only to be used as magic[1] formulæ in the performance of a sacrifice. In other words, the position taken up by the school of Kautsa does not mean that Vedic exegesis is impossible, it only means that it is useless. This extreme position which reduces religion to magic is an exaggeration of a perfectly arguable thesis which has been later formulated in the Pūrva-mīmāṁsā Sūtra "अतस्तदर्थं [illegible]" (P.M. Sūtra, I, ii, 1) which declares that the central teaching of the Veda is not "Know" but "Do", not Truth but "Act"[2] not philosophy or love of God, but ritualism. This is far from saying that Vedic words convey no meaning.

[1] Here use the word 'magic' not in the sense in which some of the practices of the Atharva Veda were magic, but as indicating the real nature of every sacrifice in which the sacrificial formula is supposed to carry no meaning but only efficacy.

[2] Compare the doctrine of modern Pragmatism and recall Carlyle's characteristic remark that the Universe is an infinite conjugation of the verb "to do" in a passage of his "French Revolution".

"Then it was that it flashed upon me with the force of a revelation that all philosophies and sciences, without exception—both those I agreed with and those I disagreed with—were *Injunctions to Do in a particular way and avoid Doing in other ways*. They all came on their spearpoint, so to speak, in some kind *of Injunction*. They were all disguised Imperatives. Behind the information was the *command* which took the form, 'Live in this way and avoid living in that.'"—L. P. Jacks.

A rich heritage of Vedic exegesis had come down to Yaska from the most ancient times, which though containing a few counterfeit coins was on the whole trustworthy. This is significantly borne out by meanings given in the Nighantu of certain Vedic words. For example, the word दमून् Lat *domus*, a house, is listed as a synonym of गृह, thus carrying a meaning to which not the slightest clue is to be found in later Sanskrit, and yet it is perfectly correct. Similarly the word अपस् Latin *opus*, work, which is given as a synonym of कर्म. This clearly shows that the tradition of Vedic exegesis which came down to Yāska had preserved the meanings not only of the Vedic words which continued to be used in later Sanskrit but even of those Vedic words which were the common property of the Aryans before their separation into different groups but had ceased to be employed during later stages of the Sanskrit language. The tradition of the Vedic exegesis goes down to Sāyaṇa whom Max Muller rightly calls 'the blind man's stick' in treading the path of Vedic interpretation. No sober scholar will therefore take up the cry "Los Von Sāyaṇa" "Down with Sāyaṇa", though we may for good reasons differ from him here and there. Lately a few commentaries earlier than Sāyaṇa's have been discovered, so that it may safely be presumed that a tradition of Vedic interpretation was not extinct in the time of Sāyaṇa. The tradition, however, was coloured by the ideas of the Sacrifice, since the class in which the Vedic learning was particularly preserved was that of ritualists. Accordingly Sāyaṇa sometimes passes over the broad spiritual sense of a word even when it is the obvious sense and takes it to convey a narrow ritualistic meaning. For example, words which clearly signify "ideas" or "thoughts" are often rendered by him as "sacrificial rites". No doubt, when the sacrificial rites were only an outward expression of the inward ideas or thought, such a rendering would not have been far from truth. But after the two had fallen asunder it would be misleading to take

the words as denoting only the outer shell'. But those modern Orientalists who decry Sāyaṇa do it on a different ground. They contend that Sayana knew nothing of the other Aryan languages, such as, Greek, Latin, Zend, etc., which throw considerable light on the meaning of Vedic words, and this was a serious disqualification in one who undertook to interpret them This contention is no doubt somewhat weighty, but its weight is largely counterbalanced by the fact that most of the Vedic hymns were composed in India long after the break up of the Aryan race into distinct peoples, and consequently the original meanings of the Aryan words which occur in the Veda must have undergone considerable change by the time they came to be used there Sāyaṇa's interpretations, which are presumably based upon tradition are, therefore, not to be set aside lightly. In doing so Oriental scholars have often gone wrong not only in interpreting a Vedic text, but even in understanding Sayana's commentary I will give an example of the latter. Much ridicule has been poured over Sāyaṇa for his alleged failure to see that the word 'कस्मै' in 'कस्मै देवाय हविषा विधेम' in the famous "Whoish" Hymn of the Ṛg-Veda Saṁhitā means "to whom?" and not "to Prajāpati" But the great Oriental scholar has not cared to investigate the further question. How did 'क' come to mean प्रजापति as it undoubtedly did at a later date? The passage in the Aitareya Brāhmaṇa, where the question is asked and answered, is not unknown to the Orientalist, but it is philosophy, and the Orientalist has nothing to do with philosophy of which the Vedic Aryans were supposed to be innocent! But see what amount of philosophy this philosophical tabloid, the little word 'क' contains. In this connection the Aitareya Brāhmaṇa

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[1] As against Max Müller Bloomfield holds that 'the Ṛig Veda ought to be looked upon as made for the ritual, not the ritual regarded as auxiliary to the Ṛig Veda' That not a single Vedic hymn was ever composed without reference to ritual application This is a remark intended only to deny all spiritual words to the Veda.

relates how once upon a time Indra approached Prajāpati and said, "Give me thy greatness", whereupon Prajāpati answered, "Who shall I be without the greatness?" and thereupon Indra observed, "Since thou asdst 'kaṁ' (कं) shall I be?' thou shalt be 'Ka' (क) ." This legend means that God bereft of qualities (nirguṇa Brahma) is an absolute 'क'—X, the Unknown, who is elsewhere called in the Ṛk Saṁhitā 'शेवः' the Great Question. Sayana refers to this very fact when he says "किं शब्दोऽनिर्धारितस्वरूपं वाग् प्रजापतिमपृच्छत्"

II

What is difficult is not the interpretation of Vedic words, but the understanding of the true nature of Vedic deities For the latter, tradition is less reliable, since religious ideas change more quickly than meanings of words. Besides, they vary largely among different members of a community, unlike words, which are mostly used in the same sense by the whole community We are, therefore, not surprised when we find Yaska noting a large diversity of views regarding the nature of Vedic gods First, there was the school of the Yajñikas or Ritualists. According to them, there was a deity corresponding to each formula of sacrificial offering whose reality may be said to be bound up with the formula itself and is not an object of independent thought or devotion Next, there was the school of the Aitihasikas, who believed in the historicity (इति+ह+आस —"so it was") or real existence of the different deities, a view which leaves scope for investigation into the nature of these deities and for pure devotion to them Then, again, there was the school of the Nairuktas or Etymologists They saw gods (from दिव् from दिव् to shine) in the light of Nature, and divided them into three groups, (1) the terrestrial, (2) the atmospheric and (3) the celestial. Each of the groups really consisted of different names of a single deity, so that the deities were only three,—Agni, the god revealed in fire or light which we see on the earth, (2) Indra or Vāyu, the god of lightning that flashes

in the sky, and (3) Sûrya, the Sun-god in the distant heaven[4]. Yaska, accordingly discusses the problem of Polytheism in the Veda, and on behalf of the Nairuktas he says "तासां महाभाग्यादेकैका अपि बहूनि नामधेयानि भवन्ति" i.e., "Owing to their greatness, each one of the gods possesses many names", and as an example he cites the case of a single priest appearing as hotṛ, adhvaryu, udgātṛ and brahman at a certain sacrifice. Another interesting analogy which he gives is "जनवदुपमा"—that is, "just as individually men are many and yet in their corporate capacity they are one State, so also the gods are at once one and many"[5]. Thus, according to the Nairukta school, although many names of gods occur in the Veda, there are really only three gods corresponding to the three lights of the Universe, the terrestrial, the atmospheric and the celestial, and the different names of the gods, taken etymologically, point to certain operations and phenomena of Nature. It should be noted that the Nairuktas reduced the multiplicity of the Vedic gods to three gods and although the illustrations which they gave were intended to apply to each of the three, logically the argument goes further and supplies sufficient reason for reducing the whole pantheon to one God. Accordingly we find Yaska noting the opinion of the "*Adhyātmavidah*" or Vedantin philosophers who held, "महाभाग्यादेकस्या एक आत्मा बहुधा स्तूयते । सकलान्येतस्यैव देवस्य प्रत्यङ्गानि भवन्ति" i.e., "There is but one Spirit—God—who . . .

[4] I have introduced the word "god" deliberately in explaining the three terms, because I want it to be clearly understood that according to the Nairuktas the physical phenomena themselves were not the deities, but only the modes of their manifestation. We cannot therefore call them "physiolatrists" in religion, except with reference to these media. It should be noted here also that the Nairuktas were etymologists primarily, and there was no necessary connexion between their method of interpretation which was etymological and their theory of three gods which was just a halting place in the journey to monotheism. It was, therefore, open to them to advance further and enclose the doctrine of one God.

[5] This doctrine of unity-in-difference is the germ of what is known as later Vedanta as the doctrine of *Bhedābheda* leading up to Sankara's *real abhedā-in-unreal-bheda* and Gaudapāda's *bheda-'pahnuta*.

owing to his greatness is glorified in many forms. Other gods are the several limbs of the One Spirit."

We have thus traced the progress of the concept of God from the Yajñikas to the Adhyatmavids, wherein we found that the former were polytheistic ritualists whose religion came to border on magic. But in justice to the class, or what was probably a section of the class, we must hasten to add that in regard to the problem of the deity of the mantras which contained no direct mention of or even an indirect clue to their god, i.e., what are called 'अनादिष्टदेवता मन्त्राः' the Yājñikas held that the deity of such mantras was Prajāpati. This at once changes the whole aspect of the religion of the Yajñikas, which in that case is no longer absolute polytheism, but ritualistic Polytheism combined with philosophic monotheism. This must be supposed to be the religion of the original Yājñikas who had not become 'fire-dried [1] or to vary the metaphor, 'smoke begrimmed[2] ecclesiastics of a later age. The opinion of the Nairuktas in regard to such mantras was that they were 'नारशंसि' —a word whose meaning has been variously understood. It is sometimes taken to mean the hymns which glorify men. But obviously this cannot have been the sense in the present context. For, if men are to be glorified they must be named, if hero-worship is to have any use. But the word may well point to the religion of Humanity (नराणां समूहः नारम्) the solidarity of mankind being already a creed of the age as we see from the evidence of the Puruṣa-Sūkta. (Rg X, 90). The word 'नरशंसि' has been also understood to mean 'अग्नि' or 'वायु' and the latter has been explained by the commentator as 'विष्णु'. In that case, the word will refer to Fire-worship or Sun-worship, both of which were well-known forms of worship in the Vedic and Avestic religions, or perhaps even in the pre-Vedic and pre Avestic religion[3].

[1] To adopt the famous expression of Lord Morley's with a variation.

[2] 'कुलधिया' —(Bhagavan)

[3] "तानि धर्माणि प्रथमानि आसन्" (—Pur Sūkt, Rg X 90)

The Nairuktas who were etymologists clearly perceived that names of the Vedic deities denoted certain phenomena, forces and aspects of Nature. Consequently they held that many of the myths in the Veda were Nature-myths. One interesting myth to which Yaska refers is that of the battle of Vrtra and Indra—which the Nairuktas interpret as a poetical representation of the phenomenon of rain, when Indra with his thunderbolt—the lightning—smites down Vrtra who is the cloud of drought which holds up the water of the sky "वृत्रो वृत्र ' मेघ इति नैरुक्ता अपां च ज्योतिषां च विरोधमात्मनोर्योर्वर्णं आहुः । तस्योपमार्थेन युद्धवर्णा भवन्ति" Many modern Orientalists have interpreted the myth as a storm-myth or a dawn-myth. Another class of myths which is read into the Veda by some scholars, who are too familiar with Semitic religions, is the Season-myth and the Lunar myth. But all these may be classed as Naturists in the science of Mythology, who follow in the foot-steps of the ancient Indian Nairuktas.

Another school of Vedic mythologists as we have already noted was that of the Aitihasikas. This school has its modern representative in the Anthropological school of Max Müller, according to which all myths are legends which have their origin in hero-worship, so that every god is in reality a historical figure. An essential difference, however, exists between the ancient Aitihāsikas and the modern Anthropologists, namely, that the former believed in gods as historical realities, while according to the latter men were turned into gods. Thus, according to the ancient Aitihasikas, Vrtra was a real demon, son of Tvastr "त्वाष्ट्रो असुरः इहैवैतस्मिन्नासीत्" while modern Anthropologists would understand him to be a certain non-Aryan hero whom Indra, the Aryan chief, fought and killed. Another Indra-myth which similarly lends itself to different interpretations is that of Indra and the Cows: the cows are said to have been confined by Vrtra or Ahi in a fortress and were released by Indra. The "cows" are variously understood as waters, and rays. Thus the myth

would refer to the phenomenon of rain due to release of streams of water of the sky pent up by the cloud of drought, or it may refer to the restoration of the rays of the Sun from the darkness of the night. Thus it may be interpreted as a storm myth or a dawn-myth. It may also be understood as the victory of the Aryan Indra over Phoenicians (called Panis in the Veda) or some tribe of Non-Aryans; and to his release of cows from the hands of the latter. How a third school of Vedic interpreters, the Adhyātmavādis, would interpret the myth can be easily imagined from one of the secondary or metaphorical meanings of the word 'गवा' viz., इन्द्रियाणि, the senses. Vṛtra, in that case, is the evil spirit who compasses or obscures (from √Vṛ-to cover) the light of Heaven (गवाम् or परमपदम्—the true or Supreme self) by confining the senses within his fold, and Sanskrit *Ahi* —a serpent—is the Zend *Azi*, the parent of the Hebrew myth of Satan appearing as Serpent in the Garden of Eden.

III

While the savants of the nineteenth century have thrown much light on the religious practices of different peoples and their studies in comparative mythology are both interesting and instructive, there are certain radical defects in their outlook which vitiate their conclusions. For example, in their investigations into the origin of Religion they treat it as a mental phenomenon, which they imagine, is sufficiently accounted for if they discover the environment and the mentality in which it springs. They seem to overlook, however, that religious consciousness is not a mere state of the human mind but a *revelation* of Truth, and the different theories regarding the origin of Religion define only the *conditions* under which the Truth dawns upon the human mind, and cannot therefore reduce the Truth itself to a mere phenomenon.

These conditions of the revelations of God—a popular word for the One fundamental Reality which inspires religions—are not the same for all peoples, so that neither

Nature-worship—in its different forms of sun worship, star-worship, fire-worship, etc.,—nor Hero worship in the form of ancestor-worship, king-worship, etc., is co-extensive with religious consciousness. What are called Nature-worship and Hero-worship are therefore not the worship *of* Nature and the worship *of* heroes, but the worship of God *in* Nature and *in* heroes.

Generally speaking, Semitic religions, while they have laid stress on the transcendental nature of God, have overlooked His immanence which is no less important. The two have been best expressed in the Antaryami-Brāhmaṇa of the Bṛhadāraṇyaka Upaniṣad. In fact, all that is good and great, whether in Nature or in Man, is a revelation of God. As Kṛṣṇa proclaims in His Gītā:

यद्यद्विभूतिमत्सत्त्वं श्रीमदूर्जितमेव वा ।
तत्तदेवावगच्छ त्वं मम तेजोंऽशसम्भवम् ॥

And are we not, in offering our respectful greetings to Pandit Madan Mohan Malaviyaji this day, on the completion of his three score years and ten, worshipping one such 'विभूति' with whom it has been our privilege to work in the Benares Hindu University?

A. B. DHRUVA

AN ANALYSIS OF THE EPISTEMOLOGY OF THE NEW SCHOOL OF LOGIC OF BENGAL

1. *Cognitions may be determinate or indeterminate*

Leaving aside the problem of indeterminate cognition, if we turn to determinate knowledge, it is easy to see that determinate knowledge must refer to an object with reference to some of its characters and qualities. When I know a book, the knowledge refers to it as "bookness". In all cognitions there is a specific relation between the cognition and its object, for it is only the existence of such specific relation that can account for the knowledge of specific objects. This relation of specific objectivity is called *viṣayatā*. This being a two-term relation it must exist both in the subject and in the object. The object and the objectivity being the same entity, the relation of objectivity exists in the object in a relation of identity (*Svarūpa-sambandha*). For if another relation was required to relate it to the object then there would be an infinite regressus of relations. But yet the relation of objectivity is admitted to be different from the object itself, for our cognitive experience refers to the object as a term in which the relation subsists. But if the relation it in the object in a relation of identity, then it becomes difficult to distinguish the relation and the object as to different entities. It is therefore that the *Nayāyikas* refer the relation to the special characteristic of the object which becomes directly revealed in cognition. Thus when a book is known, the cognition refers to the "bookness" the special cognitive characteristic of the book in the cognition "I know the book" and this characteristic of "bookness" subsists in the book in a relation of identity (*Svarūpa-sambandha*) and may therefore be regarded as different from the book and also as a relation of objectivity. This special aspect of the relation of objectivity (*Viṣayatā*) is called *Viṣayatāvacchedaka*. But even in this view there may be this

objection that here also the "bookness" and the relation of objectivity (*Visayatā*) have to be regarded as identical, and in that case the characteristic of "bookness" cannot be regarded as determining (*avacchedaka*) the nature of the relation of objectivity, which is the same as saying that the bookness is not the *avacchedaka* of the relation. This difficulty can be solved only by the supposition that objectivity (*Visayatā*) is not a relation, but a separate category which forms the extra-subjective term of the cognitive relation. This category can then be regarded as specifically determined by the characteristic of the object (e.g., bookness) which exists in the book as a relation of identity.

This objectivity as a separate category determining the subject-object relation is produced by the conglomeration of the same conditions that produced the cognition itself. It remains only as long as the cognition remains and it is destroyed also along with the cessation of the cognition. This category of objectivity is different in accordance with the different kinds of *pramāṇas*, as they all involve different kinds of causal conditions for their production. It is also different according as the cognition refers to the past, present or the future. One can remember a past event or thing and imagine a future event or thing, the category of objectivity (*Visayatā*) is such that in the present memory of past, events or things, it may abide on that event or thing, which is no longer existent, or it may abide on a future event or thing which has not yet come into being. No other entities which are separated in time, can have the relations of the container and the contained excepting that of the object and its objectivity (*Visayatā*). In all cases of inference and memory the object may be past but its objectivity which is revealed in the present cognition is subsistent in this past object. Some say that there are as many categories of objectivity as there are objects of knowledge, others hold that so long as the objects are of similar nature their numerical difference would not constitute a ground for admitting different categories of objectivity.

So far for the objectivity and the object. But there is also a specific relation between the objectivity (*Viṣayatā*) and the cognition (*jñāna*) viz., that of the determiner (*nirūpaka*) and the determined (*nirūpita*); for it is the nature of an objectivity that determines the specific nature and characteristic of the cognition. But this relation is a reversible relation and one can also say that it is the cognition that is the determiner and the objectivity the determined and they two are mutually dependant on each other for their subsistence and nature and each leads to the other. One can thus define a cognition through its objectivity and the objectivity through the corresponding cognition. The specific defining characteristic of objectivity is technically called *avacchedaka* as it limits and defines the specific nature of the objectivity, but this specific characteristic (*avacchedaka*) may have a further defining characteristic and in that case the second defining characteristic is called *avacchedakatāvacchedaka*.

When there is a cognition "the hill is fiery (*parvato vahnimān*)", the cognition of the hill has an objectivity (*viṣayatā*) associated with it, defined by the characteristic of the class-concept "hill-ness", and the cognition of the fire has an objectivity defined by the class concept "fire-ness". There is here no further defining characteristic (*avacchedaka*) of hill-ness or fire-ness. The defining characteristic may be either a quality (*dharma*) or a relation (*sambandha*). In the former case the defining characteristic may have a further limiting condition of some sort (*Kiñcit-sambandha-avacchinna*) where as the latter being of the nature of relations cannot have any further limiting condition of any kind (*Kiñcit-sambandhānavacchinna*), for if relations are admitted to have further relations that would involve an infinite regressus. Thus in the cognition "this book", the "this" refers to an object before the perceiver and both the "this" and the "book" are objects of cognition. Though the two are identical, yet they jointly qualify the

mine of the cognition, for if we take the "this" to be the object of cognition then the "book" is to be admitted to be associated with the "this" in a relation of identity. The cognitional objectivity of the book is thus defined by a relation of identity with the "this". "Identity" being a relation, it cannot have any further defining characteristic or relation. In the cognition "this book", the cognitional objectivity of the book is defined only by the relation of identity with the "this" and this relation of identity, being a relation, cannot have any further defining characteristic, and this explains the view stated above that relations are not further limited by other defining characteristics. Again viewed from a somewhat different point of view, one may arrive at the same kind of result. Thus the objectivity of the book in the cognition of a book is "bookness" and that "bookness" again is in the book as a relation of inseparable inherence (*samavāya*). Viewed in this way the "bookness" has for its defining characteristic the *samavāya* relation, but this defining characteristic, being a relation, cannot have any further defining characteristic. The objectivity of the book may, on the one hand, have for its defining characteristic a relation of identity, or on the other hand as 'bookness', a relation of inseparable inherence (*samavāya*). The objectivity of the book is thus the determinant (*nirūpaka*) of the relation of identity further unencumbered with any other relation and of "bookness" as a relation of *Samavāya*. In other words, the "bookness" and "the relation of identity have in them the determinateness (*nirūpitatva*) of the objectivity of the book in a cognition of the book.

Now it is well-known that the word "book" is equivalent to the expression "possessor of bookness" or "the locus of bookness". So the expression "the table which has a book on it" is equivalent to the expression "the table which has the possessor of bookness on it". But in the latter expression though the possessor of bookness may be associated with the table in a relation of contact (*saṃyoga*), the notion of book-

ness which is a constituent in the above cognition can only be determined by a further reference to another characteristic of it, such as the quality of bookness or bookness-ness, for an object of cognition must have a characteristic through which it is known; and when "bookness" as a constituent of the complex cognition "the table which has the possessor of bookness on it) is an object of cognition, it must be admitted to have a further defining characteristic, the quality of bookness or the bookness-ness The table has a complex defining characteristic "contractual association with the possessor of bookness". Here the first-grade relation of the possessor of bookness with the table is a relation of contact, the second grade relation is that between the bookness and its possessor or locus, the book—i.e., the relation of inseparable inherence (*samavāya*), none of these relations requires, further defining characteristic. But this complex cognition cannot start with the cognition of bookness; the bookness, it may be remembered, is a defining characteristic of its possessor, the book In the cognition of the book, the book was known by its defining characteristic, the bookness, but when the bookness is the primary object of cognition, it must be admitted to have a further defining characteristic—bookness or the quality determining the nature of bookness. Here the objectivity, (*viṣayatā*) or the book, (*pratiyogi*) has for its defining characteristic (*avacchedaka*) the bookness and this bookness has a further defining characteristic (*pratiyogitāvacchedakāvacchedaka*) the bookness, and from this point of view the book may be said to be defined by two grades of *avacchedakas* or defining characteristics.

The quality of defining characteristic (*avacchedakatā*) is not however the only point of view from which the objectivity, (*viṣayatā*) can be looked at. There are at least five other ways from which the notion of objectivity can be discerned, such as *viśeṣyatā*, *prakāratā*, *uddeśyatā*, *uddeśyatā* and *dharmatā* Take, for instance, the cognition of "man with a stick." The objectivity of this cognition has for its constituents man-ness, man, stickness, stick and the contractual

relation of the stick and the man. Though they are all within the scope of the objectivity (*viṣayatā*) of the cognition, they are not so in the self-same relation. Thus the notion "man" (which is equivalent to that which is possessed of man-ness) is expressed as subject (*viśeṣya*) in the cognition, while the notion "stick" (equivalent to what is possessed of stickness) is expressed as a predicate (*vaiśeṣya*) or mode (*prakāra*) of that subject (*viśeṣya*), the notion "man-ness" is expressed as the defining characteristic of subjectivity and stickness is expressed as the defining characteristic of the mode or the predicate and the contactual relation is expressed merely as a relation. Thus the different constituents of objectivity are expressed in different notional variations. In other words, these different objects of cognition have different types of objectivity towards the cognition. It is useful, however, to note in this connection that the notion of "mode" and the notion of "predicate" are not identical, for there are instances of "modes" which cannot be called predicates. Thus, for instance in the cognition "the book there", "the book" is the subject (*viśeṣya*) and the notion of thereness which may be regarded as a determining mode (*prakāratā*), cannot be regarded as being in any sense predicative; for the predicative force (*vaiśeṣyatā*) is in the book. The case would be reversed in the proposition "that place is occupied by a book", for in that expression the term "the place" is both the subject (*viśeṣya*) and the subject of affirmation (*uddeśya*) and the "book" presents the mode as well as the predicate. So though there may be instances where the modality (*prākāratā*) and the predicative character (*vaiśeṣyatā*) may exist in the same identical entity, the two concepts are different. The concepts of the character as an object of affirmation (*uddeśyatā*) and of "subjectness" are also different, and though in certain cases they may be found to exist together they need not necessarily do so.. Thus for instance in the cognition "the book there", it is the book that appears as the subject and it is the "there" that is the "object

of affirmation" (*uddeśya*), for here the entity of place, which holds in it the mode (*prakāratā*) defined by the character of spatiality (*deśatva*), as defined by the character of relatedness of the corresponding relation of being limited by the contactual character, has in it the character of being the object of affirmation (*uddeśyatā*). Here though the book is the subject (*viśeṣya*) yet it is not the object of affirmation (*uddeśya*).

Viśeṣya has here been translated as "subject"; *dharmatā* may be translated as the possessingness of a quality or characteristic; and since in any idea the subject is also often the possessor of the qualifying characteristics it may sometimes be mistakenly held that the subject character (*viśeṣyatā*) and the *dharmatā* character are one and the same. But this is not so, though these two are often found to co-exist together in the same entity, they are not identically the same concept, for they do not always mean the same thing. Thus in the idea "the hill is fiery", the hill appears both as *viśeṣya* and as *dharmin*, but in the idea "the fire is in the hill", the fire is the subject (*viśeṣya*), but the hill is the *dharmin*, for the phrase "in the hill" is a predicate to the "fire", but it is the hill which in the objective world contains the fire as qualifying itself. *Dharmitā* is the real possession of a character in the objective world, where as *viśeṣyatā* refers to a subject (in thought) of which something is predicated. Again in the idea "this book", the term "this" (referring to something before) is the object of affirmation and "book" represents the way in which it *is* affirmed (*vidheya*), but yet the "this" is not a *dharmin* which possesses the "book" as a quality or a character. Thus an object of affirmation (*uddeśya*) is not necessarily a possessor of character or quality.

The elements that form the object of an awareness may either refer to the separate elements such as "the tabular place", "the book", "the bookness", "the tableness", "the contactual relation" (*saṃyoga*) or these may appear combined in a particular form and may become the object of

awareness in that combined form as in the idea "the table having the book on it". In the second case the awareness is qualified principally by the subjective character as limited by the concept of tabular placeness (*deśatvavacchinna*) as determined (*nirūpita*) by the mode (*prakārata*) with the double defining characteristic of the concept of bookness (i.e. the *samavāya* relation) and the contactual relation (*saṃyogasambandhāvacchinna*). Here the tabular placeness is not directly the object of cognition but as modified as the subject of the defining characteristic of bookness. The place (where the book is) is limited firstly by the defining characteristic of placeness as modified as the subject of the defining characteristic of bookness. The place itself has two kinds of objectivity (*viṣayatā*); one is the primary substantial characteristic (*mukhya-viśeṣyatā*), as limited by the concept of placeness and as determined (*nirūpita*) directly by the mode (*prakāratā*) as limited by the concept of bookness and the contactual relation; the other objectivity is that which is represented by the mode limited by the concept of placeness as it is and unqualified by other relations. According to Gadādhara Bhattachārya, the latter is to be regarded as being limited by the former. But according to Jagadīśa Tarkālaṅkāra, there is no difference between these two objectivities and they are one and the same. Similarly the book has one objectivity purely as limited by "bookness" and secondly, as limited by the other relations as involved in the complex objectivity of the idea as understood from the phrase 'book on the table'.

If we inquire into the nature of the objectivity contained in the phrase, "the place with a book", we notice the following different objectivities:—Firstly, the objectivity residing in "bookness", otherwise called the defining characteristic of the mode (*prakāratāvacchedaka*), secondly, the relation of inseparable inherence (*samavāya*) which is regarded as of the nature of the insertive (*āmsargika*) defining characteristic (*avacchedaka*) of the objectivity as the defi-

ning characteristic of the mode (*prakāratāvacchedakatvākhya-viṣayatā*); thirdly, the universal of the relation of inseparable inherence (*samavāyatva*) which is to be regarded as the defining characteristic of the mode of objectivity. But fourthly, there is a further objectivity in that relation of inseparable inherence which stands as the objectivity of the substantial character underlying the former. Fifthly, there is the objectivity as the book. Again sixthly, there is a further objectivity which is of the nature of the substance of the objectivity as the defining characteristic of the mode (*prakāratāvacchedakatvākhya-viṣayatā*) as defined by the *samavāyā* relation underlying the universal of bookness and undefined by any other relation. There is a further objectivity underlying the contactual relation and there is a further objectivity in the universal of the contactual relation which is the subject characteristic (*viśeṣyatā*) of objectivity as the defining characteristic of the specific associative character (*sāmsargikāvacchedakatā*); eventually there is a further objectivity which is in a relation of identity with it which is of the nature of the defining characteristic.

S. N. DASGUPTA

पुरुषार्थविवेकः

श्रीविश्वनाथो विजयतामु

भारतीवदनताखिलताप्तान
यः सदा जयति वृत्तवेदः ।
शक्तिमान् मदनमोहन एव
प्राकृतमानुषविलक्षणमग्रम् ॥
तस्य लक्षतितले खलु वर्षे
वृष्टभ्यतमुपकजनृप्त्यै ।
ग्रन्थ एष पुरुषार्थविवेको
निर्मितोऽस्तु गतवत्सरशेषः ॥

प्रेक्षावद्भिः पुरुषार्थतया निर्णीतायां धर्मार्थकामयोर्मध्ये चतुर्थमिति एव परमः पुरुषार्थ इति दार्शनिकाचार्यैरुक्तायां सुदृढं सिद्धान्तः । तेषां च निर्वाणकैवल्यमुक्तिप्रभृतिपर्यायस्य मोक्षस्य पुरुषार्थत्वे आत्यन्तिकदुःखनिवृत्तिरूपतायां नास्ति कस्यापि दार्शनिकस्य विप्रतिपत्तिः सुविदितमेव मोक्षशास्त्ररहस्यविदां सर्वेषामेव प्रेक्षावताम् इति नात्र किञ्चिद् वक्तव्यमवशिष्यते । व्यापारवैशेषिकाभिर्मीतिभिस्तु मोक्षदशायां ज्ञानस्यात्मविशेषगुणत्वं समुच्छिद्यात् नास्ति मुक्तस्य आनन्दानुभव इति निःसङ्कोचमुद्घोष्यते । विज्ञानवादिनां बौद्धानां मते तत्र निर्गुणायां विज्ञानसन्ततेरनन्दायां सत्युदये स्वीकुर्वेऽपि आनन्दस्यानुभूतिर्नैव सम्भवतीति सुनिश्चितमेवास्ति । नित्यसुखसमाप्तकारो मोक्ष इति वादिनां नैयायिकानां सौत्रान्तिकानां राद्धान्तोऽपि न प्रमाणपदवीमारोहतुमुत्सहते, यतो हि तत्रापि सुखस्य तत्साक्षात्कारस्य वा नित्यत्वमभ्युपेयम् ? आद्ये विषयेन्द्रियसंयोगप्रभवस्य विनश्वरतया सर्वैरेव विवेकिभिरनुभूयमानस्य सुखस्य नित्यत्वे प्रमाणाभावः । द्वितीये तत्साक्षात्कारस्य विहितकर्मजन्यत्वे ज्ञानविशेषजन्यत्वे वा, उभयथापि जन्यभावत्वेन ध्वंसप्रतियोगित्वरूपनित्यत्वाभावाद-

संवद्दुःखलाभ एव पर्य्यवस्यतीति तन्मतं प्रमाणीकरणीयं. प्रत्यावृत्तिरूपेत्यादिना । अत्र सच्चिदानन्दब्रह्मात्मवादिनो मोक्षे स्वप्रकाशानन्दरूपे विवेकिनां प्रवृत्तिस्तन्मतप्रतिपादनपरा प्रमाणानुकीर्त्तिस्तन्मतवारयन्ति । तथाहि सच्चिदानन्दस्वरूपमेकमेवाद्वितीयं ब्रह्मैव अनादिनिर्वचनीयाविद्यया संसारीव प्रतिभाति सा किलाविद्या शुक्तिरजतादिरूपेण अत्यन्ततथाप्रतिभासमानोऽपि तत्तुल्यीभूतज्ञानेन बाध्यमानतया निवृत्तिमती सती तत्पाटवजनितप्रतिभासमानोऽपि - प्रतिभासमात्रात्मिका विनाशमुपैति तेन च विचारेणोत्पादिता सच्चिदानन्दात्मकं ब्रह्मैव मोक्ष इति सुस्थितमेवेति ।

वादेतत्तार्किका नानुमन्यन्ते । तथाहि आत्मनः सुखरूपत्वेनास्ति प्रमाणवाक्यानि- अहं सुखीति सार्वजनीनं तथा आत्मनि सुखात्यन्तभेदाभावात् न सुखरूपता, सुखमहं स्वीकरोमि तु न कस्यात्यभिलाषः कदाचिद्दुःखपरतन्त्रत्वात् न तत्तत्रत्वमात्मनः सुखरूपतायाः सिद्धिर्भवितुमर्हति । नाप्यात्मनः सुखरूपतायामनुमानमस्ति साध्यहेतोरसम्बन्धात् । न चात्मा सुखरूपः परप्रत्यक्षे स्वप्रकाशित्वानुमानं तस्य सुखरूपतायां प्रमाणमिति साध्यते, दुःखप्रध्वंसे व्यभिचारात् दुःखं निवृत्तिमत्प्रतीयमानं दुःखाभावं तत् प्रध्वंसे परप्रत्यक्षत्वस्य सुप्रतिष्ठितत्वात् । ननु नित्यसुखात्मकत्वात्तीति श्रुतिप्रामाण्यादेव सिध्यति तथा चात्मानं 'विज्ञानमानन्दं ब्रह्मेति' चोपनिषदि रसो वै सः, यतो वै श्रुतिरात्मनः सुखरूपतायामनिच्छतो साधयितुमीष्टे विरोधिश्रुतिवचनस्यापि समुपलब्धमानत्वात् । तथाहि "न वै सशरीरस्य सतः प्रियाप्रिययोरपहतिरस्ति अशरीरं वा वसन्तं न प्रियाप्रिये स्पृशतः इति श्रुतेः सशरीरस्य मुक्तस्य सुखदुःखयोरपहतिमुपदिशन्ती मोक्षदशायां दुःखमेव सुखस्यापि अभावं सुस्पष्टमेव प्रतिपादयति । अनया श्रुतिवचने सशरीरस्येति प्रक्रमात् इष्टानिष्टविषयसंयोगजनिते सुखदुःखे एव गृह्येते, तयोरेव सामान्यरूपिका सुखदुःखं शब्दस्यायमर्थः प्रतिपाद्यन्ते इयं श्रुतिर्न मोक्षदशायां प्रकाशानन्दात्मकं सुखमानन्दं वा मोक्षे प्रतीति वाच्यं सुखमात्मेन विज्ञानमानन्दं ब्रह्मेत्यादि श्रुतिवचनं संसारदुःखविहीनप्रकरणे पठितत्वात् दुःखाभावपरतया एव पर्य्यवस्यतीति वक्तुं शक्यत्वात् । अस्या श्रुतेरानन्दं पदस्यैनादृ यदि नित्यं सुखमात्मन स्वरूपमिति निर्णीतं तर्हि विज्ञानमिति श्रवणात् नित्यमपि ज्ञानमस्य स्वरूपमित्यापद्यते । तथा च सुखज्ञानयोरपि नित्यत्वात् संसारदशायामपि नित्यसुखोपलम्भः प्रसज्येत, तदेव पर्य्यायेण-

पाठाभ्यां सुखदुःखाभ्यां संसारिणः नित्यसुखोपलम्भस्य साहचर्यव्यवच्छेदार्थं भवेत्, न वैशेषिकवत् केनापि ज्ञेयत्वादिना आचार्येण इति ।

अयमेवार्थः श्रीधराचार्यैः,

सुखाद्यनुभवस्तस्य कालं वह्नेरिवोष्णता ।
नित्यं प्रकाशतामात्मन्यतो मोक्षोऽस्त्यतो भवेत् ॥

अत्र वेदान्तिन इत्थं प्रत्यवतिष्ठन्ते यदुक्तं सुखस्य अन्यत्वमिति न तत् प्रमाणसहम् 'विज्ञानमानन्दं ब्रह्मे'ति श्रुत्या तस्य नित्यत्वावधारणात्, न च सुखं मे भूयात् सुखं मे विनश्यतु इति सर्वलोकानुभूतेः सुखस्यानित्यताया सुखाभिव्यक्तिपरिणामविशेषजनितत्वात् करणपरिणामविषयकत्वात् । ज्ञानाभिव्यञ्जकमनःसंयुक्तात्मव्यपदेशवत् सुखाभिव्यञ्जकमनःसंयुक्तात्मव्यपदेशवत्वाङ्गीकारेण सकलौकिकव्यवहारापत्तौ सम्भवन्त्या श्रुतिसिद्धसुखनित्यतायाः बाधाभावाच्च । अत्रावगम्यते विद्यानन्दरूपपरेऽप्यात्मनः संसारदशायां आनन्दस्वरूपविषयका आविर्भावेऽपि न तदानीं जीवानां सदासर्वदा सुखं प्रकाशते । सर्वदैव तत् प्रकाशते चेत् प्राक् संचितपुण्यविशेषेण भोगानुकूलकालसहकृतेन इष्टविषयसंयोगजनितोऽन्तःकरणपरिणामविशेषः सम्भवेति, तदभावात्तु बाधितं न आत्मनः सुखस्वरूपगतमविद्यावरणमपसारयति, अपसृते च तस्मिन् स्फुरति खलु चिदाकारः नित्यसुखं तस्य च पुण्यविशेषजनितपरिणामस्य विनाशे पुनरविद्या तत्पूर्वेति इति स्थितमपि सुखं तदानीमावृततया न प्रकाशते, व्यवहरति च संसारी जीवः अहं सुखी सुखं मे विध्वस्तं पुनः सुखं मे स्यादिति, अतश्च रोगी सति सामग्र्यां अविलिप्तस्य नित्यसुखस्यापलापो भेदवादिनामजय एवेति ।

अत्र पुनः प्रत्यवतिष्ठन्ते करणमनःपरिणामानुयायिनी । तथाहि या खलु जीवस्य आनन्दस्वरूपात्मन आवृत्तवती दुःखत्वादिनि क्षेत्रमावर्तते, सा पुनः कस्येति विचारणीयम् । न तावत् सा ब्रह्मणः सम्भवति, सर्वज्ञस्य तस्य अविद्या सम्बन्धानुपपत्तेः नापि सा जीवानां, तेषां परमार्थतः परस्माद्भेदेऽद्वैतसिद्धान्तव्याघातात् अभेदे प्रागुद्दिष्टदोषानुषङ्गात् । सत्यमभेदे कल्पितभेदव्यवहारेण जीवानामविद्याश्रयत्वमुपपादनीयमित्यपि पक्षो न विचारसहः जीवविभागस्य अविद्याधीनत्वेऽविद्याश्रयत्वस्य च जीवविभागाधीनत्वेऽन्योन्याश्रयाणां इतरेतराश्रयदोषापत्तेरशक्यपरिहारत्वात् । तन्नाविद्यायाः आनिर्वाच्यत्वमभ्यु-

नाशङ्कनीयाऽविनाशिनमनुपपन्नमेव न दृष्टश्रुतिविरुद्धं तत् अनुपपन्नत्वभावे युक्तानां प्रमाणानां सा किं न स्यादिति वाच्यं किमुत्तरम् ?

अथोच्येत अज्ञानेन युक्तानां च अविद्या न भाति न चापि कल्पनीया कल्पनाभावात् सुतरां सर्वज्ञत्वाविद्याश्रयत्वव्यापकत्वाभावात्, जीवानां तु सा सुप्रतिष्ठितैव अन्यथा ब्रह्मत्वानुभवासिद्धत्वापत्तिः । तदपि न विचारक्षमतामावहति अहमज्ञ इति प्रतीतौ अहमर्थस्य प्रकाशमानस्य अविद्याकल्पितत्वे प्रमाणाभावात् न खलु अहमिति सार्वजनीनोऽनुभवोऽज्ञानाश्रयत्वाहमर्थस्य अविद्याकल्पितत्वं प्रत्याययति । अथापि अहमज्ञ इति प्रतीतौ प्रकाशमानस्य अहमर्थस्य कल्पितत्वमावरणसङ्कोचार्थमकल्पितत्वं तस्य चिद्रूपस्य सुषुप्तिदुरीयादौ जागत्स्वप्नादौ च आवरणाभावात् प्रकाशमानत्वात् । अहं जानामीति सामानाधिकरण्यस्य च भेदं स्वाभाविकस्य पुमानित्यादिवद् बाधपरत्वात् अहंशब्दस्य च तत्त्वमसीवत् शोधितत्वं पदार्थविषयत्वाभ्युपगमाच्च । अतः अज्ञानाश्रयत्वं अहमर्थस्य अविद्याकल्पितत्वं प्रतीतिबलादेव सिध्यतीति । नैतन्मनोरमं यतः अविद्यानाङ्कुरेऽप्यात्मनि सुषुप्तादौ अज्ञानत्वं सङ्कोचोऽवरणमेव भवद्भिरभ्युपेतव्यमन्यथा सुषुप्तजलयोर्मुक्तिप्रसङ्गात् तस्मादविद्याधीनो जीवविभागस्तत्रधीना चाविद्या इति वेदान्तसिद्धान्ते परस्पराश्रयता दुर्वारैवेति सिद्धम् ।

न खलु बीजाङ्कुरवत् जीवाविद्यावास्तवाविद्यानेतरेतराश्रयता न दोषाय इति शङ्कनीयं दृष्टान्तवैषम्यात् बीजाङ्कुरसन्तानं व्यक्तीनां बीजानामङ्कुराणां च प्रतिव्यक्तिनोदसङ्घातेन नित्यः कार्यकारणभावसङ्घातेन च सन्तानयोः प्रबोध्यप्रबोधकभावस्यापत्तौ सम्भाव्यमानायामपि प्रकृते तु जीवाविद्यासन्तानयोरनादित्वेन नानात्वाभ्युपगमेन च नयो कार्यकारणभाव कल्पनेन न सम्भवति इति निरवद्यं सर्वथा जीवाङ्कुरन्यायावलम्बनेन इतरेतराश्रयदोषपरिहारप्रयासस्तिलकल्पनमिति अविद्याङ्कुरो जीवविभागो जीवब्रह्मत्वाविद्याविभाग इति अद्वैतवादिना सिद्धान्तोऽनावरणीय एव स्थितः ।

अथात्मनि गुणाद्यष्टद्रव्यत्वांशानादिकेऽपि जीवाविद्यां प्रबोध्य प्रबोधकत्वमस्तु इति चेत् तर्हि अविद्यावत्त्वजीवत्वया किमधिकरणमभ्युपेयम् ? शुद्धा चिदखिलाविशिष्टा वा आद्ये शुद्धब्रह्मत्वापातः द्वितीये तु अविद्यात्यवाविर्भावे सुषुप्तिब्रह्मत्वापातश्च । यदि पुनरेतद्दोषपरिजिहीर्षया सच्चिदानन्दस्वरूपं

अतीव स्वाविद्यया भजति संसारं स्वविद्यया मुक्तिमुपैतीति कल्प्यते तदा तस्यैकस्यात्र विद्वद्विद्वद्गुरुशिष्यसम्बन्धोपादिष्यमाणस्य मुक्तता स्यात्।

तत्रानुपपत्तिस्तस्य गुरुत्वानुपपत्तिः कल्पनाभिप्रायस्य सर्वभेदप्रपञ्चाभावात् शिष्यत्वाभावे सैवाव्यवस्थासुव्यवस्थिता। गुरुशिष्यत्वाकल्पनेऽपि अवाधाधिष्ठितत्वे गुरोर्विद्वत्तानुपपत्तिरज्ञानस्वरूपत्वात्। शिष्यत्वाविद्यया गुरुः कल्पित इत्यपि न साधु, अविद्या कल्पितस्य गुरुत्वस्य विद्वत्त्वानुपपत्तेः। स्वतन्त्रमविद्याकल्पितो गुरुर्न चेत्थं इति चेन्न, शिष्यत्वाविद्यानिमित्तस्य गुरुत्वे सत्यपि शिष्यस्य स्वीयस्वीयशिष्यगुरुत्वेन तत्तदविद्यानिमित्तत्वात् कस्यापि परमार्थतया परमात्मत्वानुपपत्तेः। अथवा अद्वैतनये गुरुशिष्यादिविभागव्यवस्था यथा तथा, इदमत्र कल्पितत्वात् तथाते जनाद्यापि संसारे कस्यापि मुक्तिर्नास्ति तथा। आद्यकेऽपि संसारोपक्षयः स्यात् तिर्यगपि अविष्यतीति कथं प्रत्याशा? न च विद्याया अनुवृत्तेः केऽपि पूर्वं मुक्त इति वाच्यं मुक्तत्वादेवाज्ञानानां या तोऽविद्यात् या अज्ञविद्या अन्यस्य कस्यापि अविष्यतीति प्रत्याशाया गगनकमलिनीकल्पत्वात् गुरुत्वव्यवस्थाभावाच्च। तस्माद्विज्ञानैकालम्बादे बन्धमोक्षव्यवस्था न कथमपि सम्भवतीति सत्यात्मिक नवाज्ञानभेदः, सुतरामनुसरणीय एवेति।

अत्राहु. अद्वैतवादिन. सर्वज्ञत्वादु ब्रह्मणो नाविद्यासम्बन्ध. सम्भवतीति न तद्विचारसह यत सर्वज्ञत्वं नाम द्विधा सम्भवति स्वरूपतः प्रकाशतः वा। तत्र स्वरूपज्ञत्वया यदि ब्रह्मणः सर्वज्ञत्वमिष्यते तदा अस्वरूपस्य ब्रह्मणो नाविद्यासम्बन्धेऽपि तत्स्वरूपस्य सर्वज्ञत्वमेव सा अविद्याया स्वरूपब्रह्मणः कथमेत्यापतति। अथ प्रकाशतः तत्र सर्वज्ञत्वाभ्युपेयो तर्हि प्रकाशस्वरूपे प्रकाशप्रकाशकसम्बन्धस्य च अनिर्वाच्यानाद्यविद्यासम्बन्धकल्पनमन्तरेणानुपपन्ने सर्वज्ञत्वमेवाविद्यामाक्षिपति न तां अनिर्वाच्यतत्त्वमभ्युपगन्तव्य स्यात्, मिथो विरुद्धस्वभावयो तत्र प्रकाशयोरिव अविद्याज्ञत्वयो सम्बन्ध. कथं सम्भवतीति चेन्नैव विरुद्धत्वासहत्वात्। तथाहि यदि आत्मप्रकाशस्वरूपमविद्याया उच्यते तदा प्रकाशस्य केऽर्थः स्यात् स किं प्रकाशाभावः? अथवा प्रकाशान्तरं तद्विरुद्धं निर्भासः? आद्यस्यावश्य सम्भवति भावाभावविलक्षणाया अविद्याया अस्माभिरभ्युपगतत्वात्। द्वितीये तु दूषणमनुचितम्। चित्प्रकाशाद्यन्यत्र चिदाभासो न भवतीति अतस्य चिज्जडत्वं प्रकाशस्य चित्प्रकाशस्वरूपत्वमभ्युपगच्छद्भिरद्वैतवादिभिरपेक्षणीयत्वात् तदेकाभावस्य तेन सह विरोधासम्भवात्। न चैवमविरोधे

अविद्याया अनिवृत्तिप्रसङ्गात् । अत्रेदमनन्तनिरिष्यासत्वं नानैतावतोऽनन्तो-
त्पत्तिविज्ञानेन तद्वत्त्वमिच्छन्ति वा विषयकाशेन श्रुतिप्रामाण्यादेव तन्निवृत्त्युपपत्तेः ।

सर्वज्ञतया सर्वविषयावभासत्वभावस्य लक्षणः कस्यचिदविद्यासम्बन्ध
इति तु नैव शङ्कनीयं मामहं न जानामि त्वदुक्तमर्थमहं न जानामीति च अवगा-
सामानेऽपि विषयेऽविद्यासम्बन्धस्य सर्वाभुवसिद्धत्वात् । अत्रेदं एकस्यामविद्या-
भावत्वपक्षे विवृदभिद्रुद् गुरुशिष्यसम्बन्धो लक्ष्यवस्था नोपपद्यत इति यत् प्रागभिहितं
दूषणं तदप्यद्वैतिनां भूषणायैव विज्ञायते: प्रागत्र स्वप्रावस्थायामिव जाग्रदवस्थाया-
मपि तैः सर्वव्यवहाराणां अभ्युपगतत्वात् निद्रायां पुनर्विद्यायामविद्याया
नैव सम्भवति काचिदपि जाग्रदवस्था इति तुष्यन्तु भवन्तः ।

अविद्यानिमित्तस्य गुरोः कल्पितत्वेन विद्यावत्त्वं नोपपद्यत इति चेदोपप-
त्तिः उपपत्तिरिति चेदपि स्वप्नवत् विद्यावत्त्वं तत्कल्पनेनानुपपत्तिविरहात् । यथोक्त-
शिष्यविद्याकल्पितत्वे गुरोः शिष्याणामपि सकलशिष्यविद्याकल्पितत्वात् कस्यापि
परमार्थता स्यात् तदपि विकल्पासहत्वादुपेक्षणीयमेव तथाहि गुरुशिष्यादिकं
किं परिच्छिन्नं चेत्तदसत्यमर्थक्रियाशेषाभवात् निर्विशेषं ब्रह्म । तत्र नाद्यः परिच्छिन्नस्य
विद्याकल्पितत्वात्तदापरमार्थिकत्वं श्रुतिविरहात् द्वितीये तु ब्रह्मणे आत्मत्वेनाद्वैतिना-
मुत्तरं गृह्यतां परिच्छिन्नं भवतु । निरस्तसमस्तभेदविकल्पं चिन्मात्रमेव स्वाविद्या-
परिकल्पितान् द्वैतप्रपञ्चान् पश्यन् संसरति कल्पितबन्धकारमभिप्रेत्य तत्रैव
निर्विशेषं ब्रह्म गुरुरिति वा शिष्य इति वा अभिलप्यते न चेत्तावता तत् परमा-
र्थतः परिच्छिन्नं भवति इति ।

तदेवं निरस्तसमस्तभेदस्य परमार्थतः सदानन्दात्मकस्य स्वस्य प्रकाशस्वभावस्य
लक्षणोऽविद्यानिवृत्त्युपलब्धिः स्वस्वभेदापवर्गो इति सिद्धं एकभूतस्य आपवर्गस्य
सुखप्रकाशात्मकतया सदसत्सम्बन्धेन निरतिशयसुखार्थिना विवेकिना प्रकृति-
नित्याद्वैतवादिना सिद्धान्तः । अन्यादृशविभेदाभेदवादिन एकान्तिनः । वास्तु
आनन्दस्य प्रकाशरूपता नित्यता तथापि अद्वैतसम्बन्धस्य सच्चिदानन्दात्मक-
स्वापवर्गस्य वेत्तव्यतां प्रवृत्तिलिङ्गानरत्न नैव सम्भवति । सुखी भविष्यामि इतिवत्
सुखमहं भविष्यामि इति प्रतीतेः प्रवृत्तिं प्रति अहेतुत्वात् । आत्मवृत्तिया सुखमनु-
भवितुकामा एव जनाः सुखसाधने प्रवर्तन्ते न खलु आत्मना सुखता कस्यापीष्ट-
सुखसम्बन्ध एव सर्वस्य आत्मे चाद्वैतिसम्मते भात्मर्भावस्वात्मतयोच्छेदेन भोक्त-
भावसम्बन्धेऽपि सुखत्वस्य भोग्यत्वस्य तत्रासम्भवात् न अर्थविकिनी स्वाभाविकी प्रवृत्ति-

इत्येतु शक्या। अतः निरतिशयसुखसौन्दर्यमाधुर्यवैचित्र्यमनोहरे निरुपाधिप्रीतिलक्षणा भक्तिरेवापवर्ग इत्यलमतिप्रसङ्गेन।

अत एवाह श्रीमद्भगवद्गीतासु

अहं सर्वस्य प्रभवो मत्तः सर्वं प्रवर्तते।
इतिमत्वा भजन्ते मां बुधा भावसमन्विताः॥
मच्चित्ता मद्गतप्राणा बोधयन्तः परस्परम्।
कथयन्तश्च मां नित्यं तुष्यन्ति च रमन्ति च॥
तेषां सततयुक्तानां भजतां प्रीतिपूर्वकम्।
ददामि बुद्धियोगं तं येन मामुपयान्ति ते॥ इति

अतिगाढतात्पर्यजनितया श्रीमद्भगवति प्रीतिरूपाया भक्तेः स्वरूपं वैशद्येन प्रतिपादयद्भिर्गीतीयवैष्णवपरमाचार्यैः श्रीमद्भगवतोऽस्यामिमानैः प्रीतिसन्दर्भेऽभिहितम् "अथ श्रीभगवत्प्रीतिलक्षणाभक्तिमयं निष्कर्षः निखिलपरमानन्दचन्द्रिकाचन्द्रमसि सकलभुवनसौभाग्यलावण्यसारस्वरूपगुणावलीकरुणानन्तविलासमयसाविकचिद्घनसच्चानन्दस्वरूपाह्लादसमोद्रेकसुखे श्रीभगवति कथमपि चिरायमानावनपेक्षितिकालिकि स्वरसत एव समुल्लसन्ती विषयान्तरैरनवच्छेद्या वाङ्मनोऽन्तरवसहमाना कृपालुनी सारभूतिविशेषस्वरूपा भगवदानुकूल्यात्मकतदनुगतरुहादिमयप्रानविशेषाकारा वाङ्मनसगोचरविशेषदेहा वीयूषपूरोऽपि परमेन स्वेनैव स्वेहं परमयन्ती भक्तहृदान्मरहस्यसङ्गानगुणगणपरमा वाङ्मनुलवादिदयकपरिकरा सर्वगुणैकनिधानस्वभावा दासीकृतोपयुक्तवार्थसम्पत्तिभैगवत्यातिक्रान्तवैचित्र्यप्रत्यङ्गकुला भगवत्यनाकुलैकोपाहारिरूपा भागवतीप्रतिलक्षणसमयमाना विराजते। इति।

अस्यां एव भगवतस्तुत्परमानन्दरूपाया भक्तेः सकलपुरुषार्थैरेयत्त्वविवेकतः पर्यालोच्य आचार्यानन्दवर्द्धनाचार्यैरप्यभिहितम्।

या व्याचरन्ती रसयितुं रसिकं कवीनां न वा
वा वैद्यं परमार्थवस्तुविषयोन्मेषा च वैपरित्यती।
ते द्वे अप्यवलम्ब्य विश्वगणितं निर्भालयन्तो वयम्
शास्त्रा नैव तु लब्धवन्तिरायनवद्भक्तिमुत्तमं मुखम्॥ इति॥

एवं एव प्रेमलक्षणे भक्तिरेवोपपन्नः स एव सालोक्यादीनां परमः पुरुषार्थः तथाहि श्रीमद्भागवते—"यथा वर्णविधानमपवर्गश्च भवति इति। तोऽसौ

भगवति सर्वभूतानि अनन्तकेनिकलेऽनिलयने परमात्मनि वासुदेवेऽनन्य-निमित्तभक्तियोगलक्षणो नानागतिनिमित्ताविद्याग्रन्थिरन्धनद्वारेण। यदा हि महापुरुषपुरुषप्रसङ्गः।"

अस्य च भागवतशास्त्रं श्रीधरस्वामिचरणैरेव व्याख्यातं कृतम् "यस्य कर्मणैव यदिदानीं भगवदर्पितस्वस्वकर्मानुष्ठानं तद्भक्तिमेव अपवर्गश्च भवति। तस्यापवर्गस्य स्वरूपकथनं द्वितीयेन योऽसाविति। आत्मनिभगवान्स्य रागादि तद्रहिते। स हि भक्तसुखार्थमेव प्रकटते जनु पृथक् स्वसुखार्थम्। यथाहि भक्तस्तत् सुखार्थमेव। अनिरुक्ते स्वरूपतो गुणतश्च वाचामगोचरे। अनिलयने निरवधिसमस्तद्रष्टरि तद्रहिते सर्वत्र प्रकाशमाने इत्यर्थः। अनन्यनिमित्ता भोगाद्युपाधिविरहितो यो भक्तियोगः स एव लक्षणं स्वरूपं यस्य सः। तत्रापवर्गशब्दस्य प्रकृति वदति नानागतीना निमित्तं योऽविद्याग्रन्थिस्तस्य रन्धनं अपवर्जनं च्छेदनमिति यावत् तद्द्वारेणेत्यभ्यावपवर्गं उच्यत इत्यर्थः।"

तथा च निमित्तः प्रेमलक्षणो भक्तियोग एव अपवर्गपदभाक् परम-पुरुषार्थ इति भगवतो वेदव्यासस्याभिमत इति सिद्धम्।

अत एवोक्तं तेन परमर्षिणा श्रीमद्भागवते—

श्रेय सृतिं भक्तिमुदस्य ते विभो
क्लिश्यन्ति ये केवलबोधलब्धये।
तेषामसौ क्लेशल एव शिष्यते
नान्यद्यथा स्थूलतुषावघातिनाम्॥ इति

अनेन श्लोकेन भक्तिजीवस्य ज्ञानस्य नास्त्येव श्रेयःसाधनता, क्लेशकेवलं परं निरर्थकेन वर्तनं एवेति विस्पष्टमभिहितम्।

तथा

योऽन्योऽन्यविरुद्धा विमुक्तयानित-
स्तत्फलमात्मावदविमुक्तमुक्तम्।
आरुह्य कृच्छ्रेण परं पदं ततः
पतन्त्यधोऽनादृतयुष्मदङ्घ्रयः॥ इति।

एवमादिवचनं भक्तिं विरहस्य मोक्षोपायमनुष्ठितवतो जीवन्मुक्तभिमानिन संसारानिवृत्तो प्रमाणमनुसन्धेयम्।

अस्या गोपालकस्याया अपवर्गप्रदायकत्वाया अपि स्वरूपं श्रीवृन्दावनेश्वरीभक्तिरसामृतसिन्धावित्थमभिहितम् ।

"यथा

क्लेशाढ्यां सुखदां मोक्षलघुतां सुदुर्लभां ।
सान्द्रानन्दविशेषात्मां श्रीकृष्णाकर्षिणीं च सा ॥"

तत्र क्लेशशब्देन पापं तद्बीजं अविद्या चेति त्रयं परामृश्यते । पापं च द्विविधं प्रारब्धं प्रारब्धं चेति । तत्राप्रारब्धस्य भक्तेर्यथा—श्रीवृन्दावनमहिमे

"यथाग्निः सुसमिद्धार्चिः करोत्येधांसि भस्मसात् ।
तथा मद्विषया भक्तिरुद्धवैनांसि कृत्स्नशः" ॥

प्रारब्धस्यापि तत्रैव तृतीये

"यन्नामधेयश्रवणानुकीर्तनाद्
यत्प्रह्वणाद् यत्स्मरणादपि क्वचित् ।
श्वादोऽपि सद्यः सवनाय कल्पते
कुतः पुनस्ते भगवन्नु दर्शनात्" ॥

अत्र नक्षत्रयज्ञसवनकल्पत्वेऽपि भगवन्नामानुकीर्तनस्य श्रवणस्यादिगि. श्वादस्यापि सवनाधिकारित्वमभिहितं तत्रान्य दुर्जातपापभक्तं प्रारब्धकर्मक्षयान्तरेणानुपपन्नमिति भगवद्भक्तेः प्रारब्धकर्मक्षयस्य सिद्धं भवति, तथा च सर्वेषामेव स्तेयहत्यानान्तकानां च यथाधिति श्रीवृन्दावनमाहात्म्यादिश्रवणे कृते प्रायश्चित्तादि विनश्यते यथाविधि दीक्षाश्रवणे च शास्त्रलोपितत्वात्तदनधिकारोऽपि सिध्यति इति सार्वत्रिकसिद्धान्तः सोपता भगवता मैत्र्यांसंनानुशोदितत्वात् सर्वेषां भेद एव शिष्टेति राहुकृष्णीकरणीवरचेति सुव्यवस्थितम् ।

अत एवोक्तं श्रीहरिभक्तिविलासे

यथा कनकवर्णो वाति कांस्यं रसविधानतः ।
तथा दीक्षाविधानेन द्विजत्वं जायते नृणाम् ॥

व्याख्यातं च श्रीसनातनगोस्वामिपादैः नृणां सर्वेषामेव द्विजत्वं विप्रत्वमिति ।

दीक्षाश्रवणं यथा भागवतीये षष्ठे स्कन्धे

तैलाभ्यक्तं तु पुरुषं तरोदमलकादिभिः ।
नाभ्यक्तांगं तु हुदच तद्वीरान्हाभिषेचनम् ॥

अविद्याहरत्वं यथा भागवते

वनं पादपङ्कजकलाशिलातलभगया
कर्मशर्वं अभिरतुद्मथयन्ति सन्तः ।
तद्वन्न रिक्तमतयो यतयो निरुद्ध-
स्रोतोगणास्तमरणं भज वासुदेवम् ॥

तथा पाद्मेऽपि

कृतानुयात्रास्तिलाभिर्हरिभक्तिरनुत्तमा ।
अविद्यां निर्हरत्याशु शुभ्रचन्द्रेव पन्नगीम् ॥

तत्र शुभदत्वं नाम

शुभानि प्रीणन सर्वजगतामनुरक्तता ।
सद्गुणा. सुखमित्यानीन्यान्यानानि मनीषिभिः ॥

इत्यर्थाभिलुंकानुसारेण सर्वजगत्प्रीणनकरत्वं सद्गुणसम्पादनं सुखदत्वं चेति विज्ञेयम् ।

अत एवोक्तं पाद्मे

येनाञ्चितो हरिस्तेन तर्पितानि जगन्त्यपि ।
देवर्षिभूतनृपितृ जन्तवस्तत्र जङ्गमाः स्थावरा अपि ॥

दुःखनाशत्वं यथा भागवते

तस्यापि तत्पितृभिर्भगवत्यधिक्षतो
सर्वैर्गुणैस्तत्र समाश्रिता सुरः ।
हयवभक्तस्य कुतो महद्गुणा
मनोरथेनाऽसति धावतो बहिः ॥

सुखप्रदत्वं यथा तत्रैव

सिद्धः परमार्थश्चार्थो भुक्तिर्मुक्तिश्च शाश्वती ।
नित्यश्च परमानन्दो भवद् गोविन्दभक्तितः ॥

मोक्षसुखप्रदत्वं यथा नारदपञ्चरात्रे

हरिभक्तिमहादेवी सर्वा दुःखादिसिद्धयः ।
भुक्तयश्चाद्भुतास्तस्यास्तदंशकाः सदनुद्रुताः ।

सुदुर्लभत्वं यथा भागवते

राजन् पतिर्गुरुरलं भवतां यदूनां
दैवं प्रियः कुलपतिः क्व च किङ्करो वः ।
अस्त्वेवमङ्ग भजतां भगवान् मुकुन्दो
मुक्तिं ददाति कर्हिचित्स्म न भक्तियोगम् ॥

सान्द्रानन्दविशेषात्मता यथा हरिभक्तिसुधोदये

त्वत्साक्षात्करणाह्लादविशुद्धाब्धिस्थितस्य मे ।
सुखानि गोष्पदायन्ते ब्रह्माण्यपि जगद्गुरो ॥

श्रीकृष्णाकर्षकत्वं यथा श्रीमद्भागवते

न साधयति मां योगो न सांख्यं धर्म उद्धव ।
न स्वाध्यायस्तपस्त्यागो यथा भक्तिर्ममोर्जिता ॥

सप्तमे स्कन्धे च नारदोक्तौ—

यूयं नृलोके बत भूरिभागा
लोकं पुनानामुनयोऽभियन्ति ।
येषां गृहानावसतीतिसाक्षाद्
गूढं परं ब्रह्म मनुष्यलिङ्गम् ॥ इति ।

सेयं यथोक्तरूपा भगवत्प्रेमलक्षणा भक्तिरेव सकलपुरुषार्थशिरोमणिः परमपुरुषार्थ इति । तदवाप्तये सर्वैरेव विवेकिभिः प्रयत्नो विधेय इति सविनयमावेदयति ॥

श्रीप्रमथनाथतर्कभूषणशर्मा

THE SPIRIT OF INDIAN PHILOSOPHY

The soul of a people finds its highest expression in their philosophy. It represents the true spirit of an age, as nothing else does. Art and Literature also do the same. But in Philosophy lies the best and noblest expression. So if you would seek to know truly the inner life of a people, just see what philosophy it has produced. This is true of all nations that have had a philosophy of their own—whose inner life has found expression in their philosophical achievements. This makes approaches to them so difficult. You cannot go deeply into them—cannot truly interpret them, unless you have the right sort of attitude of mind in approaching them. True understanding here, as elsewhere, requires an intellectual sympathy which is so rare. We are apt more to criticise the thought of a people than to take the trouble of studying the background on which it rests—the ideas, aspirations and strivings it represents. The case of science, as it is pursued and studied now, is different here, both in its aim and method. The so-called scientific method of philosophy, as conceived in the present day in the west, is due to a misunderstanding of the true purpose of philosophy. But has philosophy any distinctive purpose of its own in the scheme of human life? The whole crux of the matter lies in a true answer to this question.

The purpose of philosophy, conceived truly, does not lie in dry speculations to satisfy mere intellectual curiosity. Here is a fundamental difference between the view-points of the East and West. Yet even in the west we find historically at times a recognition of the common purpose. This is at least true of the older philosophies, though not entirely of the modern ones. Mr Bradley, an eminent representative of English Idealism, somewhere writes to the effect that man cannot help philosophising. He means perhaps to say here that his intellectual need would lead him

on to it. If this be his meaning, it does not express adequately the true purpose of philosophy. It only emphasises the intellectual side of it—the urge one feels towards philosophic speculations. There is a deeper source of them which is not touched by the writer. True philosophy, again, is not mere cosmology. The present-day tendency of the physical sciences to go to the ultimate basis of the material universe, though passed as 'philosophic', is not really so. Here the whole lot of cosmologists, beginning with the Greek Hylozoists, are not true philosophers, but scientists. The real origin of philosophy lies in Religion, understood, not in any of its historical forms, but in the true one as embodying the highest thoughts and aspirations of humanity. Here philosophy and Religion become one. This identity, thought ultimately true, may not be admitted by all, and there will arise strong objections to it from the naturalistic standpoint. But this standpoint itself is based on a partial view of the world and of human nature. Neither the one nor the other can be reduced to a series of facts outwardly considered as mere physical or physical phenomena, which need only to be studied scientifically, if they would understand the term. Underlying the world of facts, as they call them, there is the world of values. This may not be recognised by natural science. But that human mind, at least, is characterised by incessant pursuit of values can hardly be denied. These values, however conceived, represent the ideals and aspirations of a people. You cannot truly understand man's life apart from the values it pursues. Are they mere shadowy things—mere fancies, which the imagination of a people creates? They are not. They are more real, more substantial, for man than mere material possessions, even than his body and physical life. The true origin of philosophy lies here in the effort to understand this side of human nature, whether we go to ancient Greece—to her Socrates and his disciples, or to ancient India—to her *Upanisads* and the philosophies which had their inspiration

from them. Hence the study of the philosophy of a people is so difficult. It needs a sympathetic insight and outlook unique in its nature. This is true of any philosophy in its real origin. It is true also of the Indian.

It is usually said by Western scholars that Indian philosophy is merely speculative and not practical. This charge is hardly justifiable, if it means that Indian thought is out of touch with life. As a matter of fact, all philosophy is speculative in its procedure. At the same time Indian philosophy, in its real ultimate aim, is more practical than the Western systems of the day, by virtue of its closer and deeper touch with life and its problems. This was also the sound practical note of the Socratic thought which was carried out by his immediate disciples in their speculations that form, in a way, the ultimate background and source of the subsequent Western thought. The one note running through all the systems of Indian *Darsanas* (philosophy) is *Nihśreyasādhigama* (निःश्रेयसाधिगम)—The attainment of the highest good, is, however, differently conceived in the different systems. The purpose of all of them is the same, arising out of a view of life and its vicissitudes, and the problem with them throughout was how to get rid of the miseries and distractions of life, and of the consequent struggles, finally and absolutely. If this is what Indian thought aims at ultimately, what can be more practical (in its highest and truest sense) than their philosophy? The Indian thought seeks earnestly to go to the very root of the troubles to which life is found to be so liable and to find out the true remedy of the evils.

There is a further charge, connected with the above, made against Indian philosophy, namely, that it is *pessimistic*—a word that carries in many minds an unpleasant, and therefore unfavourable, association of meaning. But a mere word conveying a particular subjective attitude and covering some unpleasant ideas does not carry much weight as a weapon of criticism. If life be really such as is calmly viewed by the Indian thinkers, call it by whatever name you would like,

the fact, if it is a fact, remains the same and solidly true. But what is pessimism in its usually accepted sense? The term has been coined to specify a theory which maintains that life as such is subject to pain and misery from which there is no escape. It rests on the assumption that these evils of life are inevitable and irremovable. Indian philosophy, though it proceeds on the admission of inseparable miseries incidental to mundane life, does not, however, regard them as irremediable. On the contrary, its special aim is to prescribe the true means of their absolute removal and of final deliverance from them. In this sense one would hardly be justified in calling Indian philosophy pessimistic. It is so because Indian thought, in the best part of it, does not confine itself to this our ordinary life, but looks up to the possibility of another and a higher life which is not so characterised. Of late the term *Meliorism* has been offered in the West as a third alternative to *Optimism* and *Pessimism*, indicating thereby quite another attitude towards this life even. According to this position, life is not inevitably subject to good or evil. There is and can be, both in life. But it rests with us to make it either by our deeds. Man can, under this view, "make a heaven of hell and a hell of heaven." This is indeed a hopeful attitude which is practically of high value. If any term, coined in the West, has to be applied at all to characterise by a single word the trend of Indian thought, *melioristic* would be more appropriate than either optimistic or pessimistic. But a name after all does not matter much. What is there in the name? This is a very sound warning, often forgotten in our disputations.

Now if human suffering be a fact, as it is taken to be, what must be its ultimate root and source? This is the fundamental problem with Indian thought, and quite philosophically it approaches the problem. For it finds this ultimate source to be in our ignorance about the true nature of the *self* and the *not-self* in their relations to each other. The search for the

one involves necessarily that of the other. For we are apt to confuse the two—taking that to be the self which really belongs to or forms a part of the not-self—"अनात्मनि आत्मबुद्धि". This is the root ignorance out of which arises all the miseries of life. Hence the fundamental lesson of Indian thought is 'Know thyself', as Hegel puts it so aptly. This inquiry about the true nature of the self (*atman*) was promulgated in one of the earliest upanishads—the *Brihadaranyaka*, where the sage Yajnyavalkya is related as instructing his worthy partner of life—Maitreyi—in the mysteries of the true nature of the *atman*, when he found that her mind was already set on the search for the things of abiding value as against mere earthly possessions. The discourse of the sage proceeds by way of illustrative examples, to show that all other things of the earth have but a relative importance for the soul, which is, therefore, of absolute value, and so he says at the end by way of instruction to his wife: "Lo, verily it is the soul (*atman*) that should be seen, that should be hearkened to, that should be thought on, that should be reflected on. Lo, verily, with the seeing of, with the hearkening to, with the thinking of and with the understanding of the soul, this world all (the whole world) is known" (II-4-5).

The same note about the supreme importance of the knowledge of the true nature of the soul and of its value runs through all the systems of Indian thought, even the materialistic *charvaka* not being excepted. For the value of life and its aspirations is ultimately determined by the nature of the self. If it is nothing but a product of matter, as the materialists would have it, then there can be nothing of supreme value but the enjoyment of physical life as it is here. But if the self is regarded as something other than the body, however the self may be conceived, then the ultimate purpose and value of life would necessarily become different. The dignity of life depends ultimately on that of the self. All other values would appear to be insignificant by the side

of the value of the self, if we but once realised its true nature as something distinct from the body.

Thus the underlying aim of all the systems is the same, namely, to determine the true nature of the *atman* and thereby to ascertain that which would be of supreme value in life—the knowledge of the self. Speculations about the nature of the not self, arising in connection with the search for the self, have but a subordinate place in them, though necessary to consider in order to determine, by way of distinction, the true nature of the *atman*. The central subject of all the systems is the *atman*. The different systems are but the various lines of the attempts made to conceive its nature from different standpoints and levels of thought as determined by the stages of culture and traditions. Each system takes the life and its aspirations as it finds them prevalent in its own time and attempts to find a solution of the problems which they give rise to. The underlying purpose is to ascertain thereby the things of the highest and imperishable value. Now, though this is the ultimate purpose, once the intellect is set on the problem, it cannot rest confined to the one problem, but is led on to others arising in connection therewith. And so we find some speculations on them which appear to be of no or distant connection with the main problem. It is perhaps in this way that each system has developed in its course. Hence to understand the true spirit of Indian thought we have to fix upon the central theme of them all, namely, the conception of the self (*atman*), and to trace the development which the conception is found to have undergone in the different systems. No such attempt, however, is observed to have been made by writers on the so-called History of Indian Philosophy, if by history is meant here as it has been meant by some recent writers, the chronological order of development of the different systems. Materials sufficient for this purpose are still unavailable. The systems as presented to us through their recognised texts (sutras, karikas, etc., and the commentaries on them) con-

tain cross references from which it is difficult to determine their actual historical order. The consequence is that there has been much guess-work in the field, due to, it may be, the pre-conceived ideas of the writers themselves. The history of Indian thought therefore remains still a work for the future. Avoiding this ambitious attempt, a presentation of the principal systems can, however, be made, I suppose, from the standpoint of the development of the conception of the self (*ātman*), which forms the central subject in them. Whether this mode of presentation will afford any clue to their chronological order or not cannot be said definitely. Still the attempt is, I think, worth making, at least in the interest of the spirit of Indian thought as it has found expression in the course of its development. I am not going into any detailed presentation of the kind here. But I would suggest some such order below as it has appeared to me to be plausible and found to have some value as a method of procedure.

The earliest conception of the self, which appeals to common people, appears to have been the bodily one—the soul being not regarded as something distinct from the body but as a manifestation or product of the body, by the whole of it or by some of its part or parts. This is the conception presented by the *Cārvākas*—the Indian Materialists. Here the unconscious body is held to generate, by purely physical processes, consciousness which is mistaken as a distinct entity. The next step taken is naturally the admission of a separate entity as the *ātman*, but still unconscious in its nature due, it must have been, to the difficulty of understanding how the body by itself could become conscious. This step was taken by the *Vaiśeṣika*, which recognises the soul to be a substance distinct from the body and having its own properties, intelligence (*buddhi*) or consciousness being the main distinctive characteristic. But here too the unconscious becomes conscious, as the *Vaiśeṣika* does not recognise consciousness to be an inseparable attribute of the soul, but a fleeting product of it that comes and goes. The Nyāya main-

rains the same position, as it does in many other respects adopt the Vaiśeṣika ontology. The Mīmāṃsā too, as a philosophical system, does adopt uncritically the same conception of the soul here. In none of these systems, however, does the fundamental problem does seem to have been faced properly—namely, how the unconscious could become conscious, when between the two there is a world of difference both in nature and functions. Thus arose, it may be surmised, a necessary attempt to handle the problem boldly in a new way. The result was that consciousness came to be regarded as an inseparable attribute of the soul. This was done by Jainism, which, however, admits still the soul to be a substance (*Dravya*) underlying the changing phases of its attributes. But this conception of the soul as a substance is so thin in Jainism, because of its position that a substance and its attributes are united in an inseparable whole, it is no wonder that the next step should be to discard this nominal substantiality and regard the soul rather as a group of its attributes and changing states. This bold departure was made by Buddhism in its original position as presented in the Pali Tripiṭakas. This is one line of development of the conception of the self culminating in the utter phenomenalism of earliest Buddhism. But the problem which ultimately led to this result might be supposed to have taken another course of solution in view of the difficulties involved in this phenomenalism and its consequences. We might suppose the possibility of another line of thought coming up to recognise consciousness to be an entity by itself with its unique nature and functions, instead of being regarded as a property of a substance distinct from itself. This was done by Sāṃkhya in its conception of the *Puruṣa* (soul), which is regarded as pure consciousness having its unique existence in the scheme of the universe. But Sāṃkhya is found still to uphold a plurality of souls, like the other systems above, quite inconsistently with its position as regards the nature of *Puruṣa* as pure consciousness. The problem next naturally was, How could consciousness be split

up into many. For there cannot be any differences in consciousness as such due to differences in attributes, which *Purusa* in its pure nature is devoid of. So logically came the conception of unity of consciousness, which cannot be diversified in itself into the many selves of living beings, as *Sankara* has well put it in his criticism of the Sankhya position here. The apparent diversity must be due to the different bodies (*upadhis*) to connection with which consciousness functions. There can be only one consciousness as such, call it by whatever name you would—*Purusa* or *Atman* or *Paramatman* or *Brahman*. This was the position adopted by the Monistic Vedanta, which may therefore be regarded as the logical development of the Sankhya position and the highest culmination of Indian thought so far as the conception of the self is concerned. I have stated already that I do not press this presentation as an account of the actual development of Indian thought in the chronological sense. My purpose here was to show that this might be regarded as one of the plausible ways of presentation in lieu of a *history* of the thought, which is still in the making.

P. B. ADHIKARI

THE VICISSITUDES OF THE KARMA DOCTRINE

A critical estimate of the Doctrine of Karma, which sways the faith of millions of Asiatics professing the three principal religions of Hinduism, Buddhism and Jainism, is rendered peculiarly difficult by a variety of reasons. The initial difficulty is that an exact formulation of the doctrine is nowhere to be found. Its existence in the Vedic literature has been questioned[2] and no attempt has fully succeeded in tracing it back to its roots sources in the religious and philosophical literature of India[1]. Its philosophy of life has not found an echo in the heart of the West and Pythagoras and Plato are the only two prominent names that come to the mind as having formulated analogous eschatological doctrines, and the source of their inspiration too is equally shrouded in obscurity[3]. The mysterious character attached to the doctrine in the Yajnavalkya Arvabhaga dialogue in the Bṛhadaraṇyaka Upaniṣad was relieved only by the general formula that good begets good and bad bad[4], and the subsequent development of the doctrine has

[2]Deussen, *Philosophy of the Upanishads*, p. 317 ff.

Grassold, *Religion of the Rigveda*, p. 313. (He finds an anticipation of Karma in Ṛgveda. R. V. I. 169. 7; x. 14. 8.)

Belvalkar & Ranade, History of Indian Philosophy. Vol. 2. *The Creative Period*, p. 61, p. 167.

Ranade, *Constructive Survey of Upanishadic Philosophy*, p. 147 ff; also p. 49.

See RV. x. 117.9

[3]Ranade, *Const. Sur.* p. 141.

Macdonell, *History of Sanskrit Literature*, p. 155.

Garbe, *Philosophy of Ancient India*, pp. 3-5.

Gough. *The Upanishads*, Ch. 1.

[4]Garbe, *Phil. of Anc. Ind.* p. 59 ff.

Macdonell *Hist. of Sans. Lit.* p. 422.

Keith, *Religion and Phil. of the Veda & Upanishads*, p. 634 ff.

Keith, J. R. A. S., 1909, p. 569 ff.

[5]Bṛ. Up. iv. 3. 15.

been on such divergent lines, almost from the very beginning, that a single coherent formulation, accepted by all schools of thought has never been possible. It would be hazardous to assert that these different formulations always arose in his torical sequence in response to the changing philosophical and religious ideas of the times the Upanisadic, Buddhistic and Jaina forms are so close together at the time of their first enunciation that it seems as if a floating mass of popular beliefs crystallised in different fashions the religious and philosophical genius of their respective schools. In the process of crystallisation it absorbed foreign matter from older sources and new situations, and the subsequent history of the never-too-rigid doctrine has been profoundly influenced by popular superstition, ebestic faith and the cult of the *manes*. In two remarkably informative articles Hopkins drew attention to the modifications of the Karma doctrine in later times[5]; but when it is difficult to say what the original formulation was, it is perhaps better to affirm that the heterogeneous elements that went into the original forms were differently emphasised in course of time and give the appearance of so many modifications. A few genuine modifications do indeed occur, but differential accentuation explains a good many of the divergences that took place in course of time

An appraisal of the value of the doctrine has also been rendered difficult by the fact that while the different philosophical and religious systems criticised one another on almost every conceivable point of speculation or dogma, the doctrine of Karma received a singular unanimity of support, except in matters of detail, from rival systems of thought and faith Reference to heterodox modes of thought on the subject are

[5] J. R. A. S., 1916, pp 581–593, J. R. A. S., 1917, pp. 663 672

(Most of the Epic and Buddhistic references of the present paper are taken from Hopkins).

F Yeyde, in a chapter of his *Karma and Reincarnation* summarises Hopkins's two articles.

Keith *Rel. & Ph. of V. & Up.*, p. 379.

not indeed absent[6], but the major creeds gave a short shrift to those speculations which sought to do without the law of moral action or, like the Cārvākas, denied its bearing upon the destiny of the soul[7]. That such a controversial theory should be accepted without much questioning has puzzled historians: that orthodoxy and heterodoxy should alike accept it has caused greater perplexity. Detached from theological moorings, heterodoxy probably found in the inexorable law of moral justice something to stabilise conduct; but that orthodoxy should, in spite of its religious orientation, find no scruple in identifying *daiva* (divine decree) with *bhāgya* (self-acquired destiny) and reduce God to a helpless operator (if not a mere witness) of a self-adjusting moral mechanism[8] has caused genuine surprise.

A third difficulty, that is common to all speculations regarding the hereafter, is the impossibility of verifying or disproving the truth of the doctrines. A portion of the effect of moral action lies beyond the ken of man, and the uncertain

[6] Dialogues of Buddha, Brahmajāla Sutta & Sāmaññaphala Sutta
Barua, *Pre-Buddhistic Philosophy*, p. 189.
Rockhill, *The Life of the Buddha*, p. 100 ff, p. 255.
Rhys Davids, Conf. Sw. p. 180
Belvalkar & Ranade, Cr. Pur., p. 451 ff.
B. C. Law J. A. S. B. 1914, pp. 400-424
Kaṭha Up. I. 1.20.
Śv. Up. 1.2
Yamakami, *Systems of Buddhistic Thought* p. 51.
[7] Caraka Saṃhitā, Sūtrasthāna xi. 4 & 18.
Sarvadarśanasaṃgraha pp. 13 14 (Abhyankar's Ed.)
Viṣṇu Purāṇa, III. 18.
Rāmāyaṇa, ii. 109.
[8] Manu, xi 47.
Sāṃkhya Sūtra, v 2
Sarvadarśanasaṃgraha (Śaiva Darśana), p. 176 ff (Abhyankar's Ed.)
Deussen, *Ph. of the Up.*, p. 232
Keith, *Rel. & Ph. of V & Up.* p. 478
Hopkins, J. R. A. S., 1906, p. 785
Karmavipāka, p. 1.
J. Bhattacharyya, *Kavirāj's Conception of the Soul*, Philosophical Quarterly, Vol. VI p. 46.
Yājñavalkya Saṃhitā Prāyaścittādhyāya, Sl. 140

reply given to the moral question here below—the success of the unscrupulous and the failure of the good—has rendered a theodicy necessary and has not excluded the possibility of skepticism and atheism. Even when on pragmatic grounds it has been found necessary to postulate the operation of a moral law, the character of the nucleus has totally determined the nature of the moral organisation. The belief in a single life theory has rendered monotheism and messiahship almost inevitable, while a multiple life theory with a polytheistic background has thrown man more upon his own moral resources and made him less optimistic than a man with faith in an almighty God.

It must not be forgotten, however, that the uncertain light thrown on the moral problem has not been to the taste of those who see in the denial of the Karma doctrine a great danger to social peace. The Jātaka stories were meant to show that in certain privileged persons the possibility of consciously apportioning present enjoyment to past action was not debarred, and one of the powers acquired by Yogic practice is this capacity of remembering one's past life[3]. Whether *jātismaratva* is inborn or acquired, there can be no doubt that it confirms at one stroke the reality of transmigration and the efficacy of moral action. But, with the threefold handicap mentioned above, it was not possible to formulate the exact nature or appraise the real value of the doctrine. Even when a strong theistic movement in mediæval times led to a substantial modification of the doctrine in popular belief, no systematic attempt was made to reconcile the older and the newer phases of the doctrine. Without seriously challenging the doctrine itself, strong psychological and religious motives introduced innovations here and there to palliate the rigidity of an uncompromising creed and make it acceptable and bearable to weaker morals.

The most general formulation of the Karma doctrine

Hopkins, J. R. A. S. 1907, p. 669.
Garbha Up. 3, 4.
Yoga Sūtra, II. 39.

would run somewhat thus: Every exercise of the will power in thought, speech and action acts as a moral cause and confers on the agent an amount of merit or demerit according to the nature of the act performed, and this moral effect influences the subsequent fate of the individual concerned. Now, on this general theme variations can very easily arise. Is it necessary that the will should be exercised, or would even an involuntary act produce a moral effect? Would mere will without any overt action produce a moral effect? What type of agent is affected by moral action: is it merely man? or, are gods and animals and plants (supposing all have sensation) equally affected by the moral law? Is the Supreme God subject to the moral law? Does merit reside in the agent or in the object? Is it necessary that the same person should act and enjoy, or would the law be satisfied if somebody else suffers the consequences of moral action? Does the law operate automatically without reference to the intervention of a divine Providence, or is the operation of God necessary to connect deed with fruition? Can the operation of the moral law be suspended or annulled? What is the order of operation when the acts performed are of different kinds? When does the moral effect take place? Is there any quantitative relationship between action and enjoyment? Can the fruits of moral action be transferred voluntarily or involuntarily? Does moral action take place in every embodiment, or are there lives which are mere rewards or penalties of past actions? Where do men enjoy the fruits of action? Can Karma be finally extinguished and if so, how? Does Karma explain every type of inequality? Is man the agent of his own actions or is he a mere tool of divine activity? What is the exact amount of his own responsibility? How does a being, in spite of the operation of the inexorable law, improve or degrade its status in existence? How exactly can God or man help beings in attaining salvation? The vicissitudes of the Karma doctrine are all to be referred to the different answers given to the above questions in different systems of philosophy and religion

Now, the germs of all these thoughts are to be found in the earliest speculations, and by the time the doctrine came to be formulated with a tolerable exactitude, diverse strands of belief had already entered into its composition. The Vedic reliance upon the gods who could take men to their own abode and send the enemies to an unpleasant residence, the spirits of the departed going into plants, the fear of *punarmṛtyu*, the deification of men, the two paths, the disparity in status among the gods and the story of Vāmadeva[10] supplied the nucleus of the creed, and the dark rites of the Atharva-Veda with their magical efficacy supplied a prototype to the speculations of the Brāhmaṇas. The Brāhmaṇas supplied the efficacy of a faultless sacrifice and the helplessness of the gods in the face of a rite correctly performed (the elements which supplied the Mīmāṁsā school with its doctrine of the Apūrva and its autonomous operation), the story of the deluge which was latterly built up into the conception of the *pralaya*, the conception of sin and the necessity of *prāyaścitta*, the possibility of vicarious enjoyment of the fruits of sacrifice performed by priests, the necessity of due cremation, the vengeance of the oppressed upon their oppressors in another realm, judgment of merits and demerit and a more detailed account of heavens and hells together with a more developed cult of the Fathers and of the constellations[11]

[10] Deussen, *Ph. of Up.* p. 417

Belvalkar & Ranade *Cr. Per.*, p. 26

Grimblot, *Rel. of RV.*, p. 318 & p. 340 (the question of Punarjanma)

R. V. ix. 3.3; iv. 24.1; iv. 27.1; vii. 76.4; vii. 88.5, vii. 104, ix. 97.8, ix. 113.7-31, x. 6.7, x. 14.8, x. 17, x. 16.1-3; x. 17.3, x. 18.1; x. 16.4, x. 18.7; x. 61.11; x. 88.15

AV. iv. 1.37, xx. 4.38, xviii. 4.62

(See also Ś. Br. xiv. 8.1.20.)

[11] Macdonald, *The Brāhmaṇas of the Vedas*, pp. 46, 93-137, 148 ff.

Ś. Br. i. 2.3.4; ii. 3.3.8; vi. 2.2.27, x. 4.4.12; x. 6.3.1, xi. 4.7.34, xi. 4; xi. 7.2

Kauṣ. Br. vii. 4, xiv. 1.27. Ait. Br. iii. 7

But see Ṛv. x. 17.4 & AV. xviii. 2.34)

Belvalkar & Ranade *Cr. Per.*, pp. 16, 47, 49, 61, 75

Farquhar, *Outline of the Religious Literature of India*, p. 45

The Aranyakas popularised the theme of retiring from the world and the possibility of gaining status by meditation rather than by costly sacrifices[27], and the Upanisads completed the overthrow of work as making for salvation, extolled self knowledge and Brahma knowledge as the means of a new type of salvation that had nothing to do with heaven and placed the Karma doctrine on a secure foundation by supplying the necessary eschatological details regarding the fate of a soul in bondage and the means of avoiding rounds of rebirth[28]. The conflicting ideals of residence in heaven or hell according to the prescription of the gods who act independently and of the automatic function of a moral law in which illumination counts more than work or in which works produce their effects without the help of the gods could not be properly reconciled, and these led at a later time to a radical difference in outlook between the theistic faiths and the philosophical religions. The attempt of the Brahmanas to effect a reconciliation by assuming that the gods were obliged to reward sacrificial actions could not prove very successful for obvious reasons; but their example was followed in later times. Except in the theistic schools, the Upanisadic ideal was more widely followed, and although Jainism made a curious medley of a salvation by knowledge, a residence of the *siddhas* and a karma with form, Buddhism, in spite of its *anātmavāda*, agreed substantially with the Upanisadic position and dispensed with a heavenly residence to be won by work, in the early history of its career. In all these schools of thought the gods persist, but in a colourless form the Brāhmanas had subdued the gods but these ignored them, placed a sage above the gods in enlightenment[29] and propounded a doctrine of liberation in which the cardinal tenets

[27] Keith, *Rel. & Ph. of V. & Up.*, p. 490 ff.
Belvalkar & Ranade, *Cr. Per.*, p. 86.

[28] Deussen, *Ph. of Up.*, pp. 313 361, 411-412.
Ranade *Cons. Sur.*, pp. 145 186.
Belvalkar & Ranade *Cr. Per.*, p. 212 ff., p. 271 ff., p. 371 ff.

[29] Hopkins, J. R. A. S., 1906, p. 782.

were the dignity of human existence, the futility of sacrifices (especially those involving the taking of life), and the attainment of a condition having no similarity with residence in a blissful heaven, in close proximity to a god, where all sorts of enjoyment like those of earth are available.

That the Purva Mimāmsa should be able to dispense with the necessity of a moral Governor and yet be able to uphold the validity of the moral law need not cause any surprise, for the Jainas and the Buddhists had done the same before, though on different grounds. The Vedic Ṛta, originally associated with the all-seeing Varuṇa was gradually freed from theological implications when the status of that god practically vanished in later literature[11]. Improper tales of gods began to be circulated and the *asuras* were supposed to disturb their heavenly peace[12]. With such a corrupt and powerless pantheon the moral law had obviously little to do, and the realm that could be overrun by demons and whose presiding deity Indra had to keep his throne by decent or outside help was scarcely a place about which good men would be enthusiastic as a post-mortem residence[13]. Gradually the belief grew that the gods themselves were transitory—that there have been many Indras, for example,—and that it was possible to attain heavenly status by austerities as in fact the gods themselves had done[14]. The transitoriness of the divine

[11] Grunwald, *Rel. of RV.*, p. 153
Macdonald, *Br. of the Vedas*, p. 192
H. D. Bhattacharyya, Philosophical Quarterly, Vol. IV, p. 132
[12] Belvalkar & Ranade, *Cr. Per.*, p. 13 ff
Macdonald, *Br. of the Vedas*, pp. 47, 93, 107 ff, 121.
Ś. Br. iv. 1. 1-4 Ait. Br. vi. 11.
Mahābhārata Parvas, heavy 1 ff
[13] Macdonald, *Br. of the Vedas*, pp. 121, 127 ff, 170
Abhijñānaśākuntalam, Canto VI.
[14] Macdonald *Br. of the Vedas*, pp. 99, 107.
Radhakrishnan, *Indian Philosophy*, Vol. II, p. 647
Cf. also Belvalkar & Ranade *Cr. Per.*, p. 119.
Ś. Br. xi. 2. 1 11; ix. 5 1 2 11. Ait. Br. iii. 10
See also Warren, *Buddhism in Translation*, p. 423.
Gough, *The Upanishads*, p. 21

posts, (for the gods are really incumbents of posts and not personalities) spread to heaven itself which could be rolled up like leather, as the Upaniṣads picturesquely describe and be abolished ultimately But even if that contingency does not happen, the possibility of eternal residence in heaven was extremely doubtful. Thus, though the Pūrva Mīmāṁsā still fought for a heaven to be won by faultless sacrifice and apparently regarded it as permanent after the manner of the Brāhmaṇas, the heterodox creeds continued that tradition of the powerlessness of the gods which the Brāhmaṇas had initiated, and that ultimately led to the Vedantic doctrine that, barring Brahman, nothing is eternal—not even the personal Īśvara, much less the lesser gods with their heavens. To such gods offerings were useless, and so logically the cult of sacrifice fell into disrepute in Jainism, Buddhism and the Upaniṣads, and the Pūrva Mīmāṁsā saved the face of the sacrificial cult only by reverting to the doctrine that *mantras* have an efficacy of their own irrespective of the existence of God, and that the heaven to which good men go need not be the seat of any particular divinity.

It would be a mistake to think, however, that the champions of a blissful future in heaven (or a painful one in hell) ceased to exist at any time The sacrificial cult, though attenuated to a considerable extent, never died out completely, and austerities continued to be practised all though the centuries. Overlordship was signalised by Aśvamedha and Rājasūya, but even householders practised less costly sacrifices in the hope of a reward in heaven. Secular prosperity could be secured by sacrifice and worship: this belief persisted in popular cult and became almost universal at the end of the Upaniṣadic period, when the formless Brahman had failed to capture the popular imagination and concrete gods again made their appearance. But religion had become chastened by heterodoxy to such an extent that, except in the theistic movements patronised by the mass, heaven lost much of its old splendour among the cultured. The distinction between

an esoteric and an exoteric creed was inevitable and accordingly we find that not only Jainism but also Buddhism and Hinduism constructed tiers of heavens and of hells to make provision for saints and sinners of different grades in the after-life[19]. With the rise of the sectarian gods in Paurānic times the heavens had become almost completely rehabilitated in popular thought, and only the philosophical tradition refused to accept the picture of a heavenly balance, wherein the souls had their merits judged, and of an eternal abode of enjoyment in light, or of torture in gloom after judgment[20]. That gods should send chariots down below to bring human help against the *asuras*, that a sage should by sacrifice send Triśaṅku to heaven which the latter could not retain, that Yudhiṣṭhira and others should have to toil uphill in order to reach heaven, that Yama should be absent from home when Naciketas reached his place, and such other stories[21] gave such a crude conception of the nature of heaven and hades that philosophy felt no obligation to retain them as the final destinations of the soul. If good brought such a heaven and bad such a hell, it is necessary to assert that salvation comes by going beyond good and evil and that both meritorious and demeritorious actions must be transcended by philosophical illumination about the true nature of self, its distinction from not-self and its relation to the Absolute.

It was therefore necessary to examine what other kind of karma was possible that would be beyond the pale of the moral law and would not lead to heaven or to hell. There are of course many a moral actions which, not being a product of sentience or intention, are excepted from the operation of the moral law—the *as many* physical happenings and

[19] Mrs Sinclair Stevenson *Heart of Jainism*, p. 268 ff
See B. C. Law, *Heaven & Hell in Buddhist Perspective*
Viṣṇu Pur II. vi.
[20] *Muṇḍ Up.* 1-2-7 10.
Manu, XII. 18 & 28
Keith, *Rel. & Phil. of Veda & Up.*, p. 475
[21] *See* Keith, *Rel. & Ph. of V. & Up.*, p. 482.

the acts of sentient creatures involuntarily performed. But there were others which fulfilled all the other conditions of being a true karma and yet did not produce any karmic effect. There are, first of all, the creative, preservative and destructive activities of God which involved volition: though these affected creatures pleasurably or painfully, it was never suggested that God suffered the consequences of His acts and was a better or a worse God for having indulged in previous activities of any kind. When the Supreme God assumes the nirmanakaya, He is not determined thereto by any latent deposit of His past actions nor is He obliged to keep the world in being for any length of time as determined by the effect of His previous karma. He has not to bear the world like Atlas by way of suffering. His acts do not determine His future capacity and every time by His free will and act (lila) He brings the world into being and dissolves it again. Even when the karma doctrine introduced the innovation that God's capacity did not extend to altering the seeds of a future world sown by the karma of finite beings and that all that He was expected to do was to join fruition to previous actions in the shape of a world of creatures with bodies appropriate to the deserts of each being, it was never contended that the bringing about of the dissolution of the world to give to creatures, tired of continuous rebirths a respite from ceaseless embodiment, or the restarting of the world-process from the point at which it had stopped, was determined by the *ayuṣ* of any finite creature. God was not affected by afflictions, karma, fructification and stock of deserts, as the Yoga philosophy said[28]. Another kind of action that led to no fruit was the spiritual activity of the enlightened. After the illumination has come, all stored-up seeds of action are burnt up, and although like the potter's wheel the momentum of *prarabdha karma* could not be stopped till the dissolution of the frame according to the karmic law, all *saṁcita* and *agamī* karmas were at end and no further action of any kind could

[28] *Yoga Sūtra*, I. 24

Bh. Gītā, iv. 14.

produce a moral effect in the case of the *jīvanmuktas*, who simply waited for the dissolution of their bodies to enjoy *videha kaivalya*. The enlightened ones were therefore *ayāyins* or non goers and their acts bore no fruit[20]

The same cannot, however, be said of the acts of gods who incarnated themselves and subjected themselves to the law of human existence. It was open to them to be embodied or not to be embodied, but once they abandoned their transcendental freedom in favour of an empirical existence they came under the sway of moral determination. Again and again are stories told of gods who, to rid the world of oppressive demons or kings, took form and, in the course of achieving their primary object, had to inflict pain on innocent beings By so doing they had to suffer the consequences of their acts If Rāma could not enjoy the company of Sītā for long, it was because he had to make Mandodarī a widow If Kṛṣṇa was pierced fatally in the sole by a hunter, it was because he had in a previous incarnation killed Bali who had done him no wrong and his sin must be avenged in another incarnation of His own according to the moral law which prescribes that one inflicting harm wantonly must suffer the same kind of harm, and generally it is the victim that must return the blow[21] We need not refer to the fact that in a thoroughly anthropomorphic heaven the moral law reigns over the gods as on men, especially if the gods are temporal in character and can lose their godhead in consequence of an immoral

[20] *Muṇḍ. Up.* I. 2.11, *m.* 2.6.
Śv. Up. 1 4 11g v 7.
Br Ār. Up. iv. 4 23g vi.2
Ch Up. v 10. *See* however viii. 6 2 1
Radhakrishnan, *Ind Ph.* II pp. 664 5, 731
Keith, *Rel. & Ph. of V & Up* pp. 583-4.
[21] *Mat Purāṇa, ccxlvi.* 5-6.
Kavirāja's *Bengali Rāmāyaṇa*, p. 480 (D. C. Sen's Ed.)
Padma. Pur., Srishṭikhaṇḍa, Ch. xxvi; Ch. viii 243 ff
Skanda Pur., Prabhāsakhaṇḍa ch elev
Bhaviṣyottara Pur., Madhyakhaṇḍa, ch. xi.

act. Indra, who has been the prototype of earthly rulers in power and passion alike and who practised deceit and debauchery without remorse, had to pay the penalty of moral lapse over and over again and could keep his throne only by continual expiation and the good-will of other gods[68]. Curses take effect on gods and all other heavenly denizens as on men, and generally expiration has to be through an earthly residence for some time. But the fates are more kind to the gods and generally a short period of punishment with no further consequences of the actions of their mortal life is prescribed. Karma has now become a cosmic law of action from which no kind of being is free.

But to revert to the enlightened once more. What exactly did they attain in salvation by knowledge? We have discussed elsewhere the different speculations on the subject[69] and shall briefly refer here to such points as have a bearing upon the present discussion. Are heaven and salvation and also their means, karma and jñāna, so radically opposed in nature that there can be no point of contact between the two? Although a few diehards claimed that faultless performance was enough for giving good results (and today when in the performance of daily and seasonal rites the repetition of Sanskrit *mantras* in an archaic language without understanding them is supposed to give spiritual benefits, the same faith in magical effect of right utterance is operative), the necessity of clear understanding was almost universally recognised. Conversely, even in the Upaniṣads, those despising karma are consigned to a worse gloom than those ignoring the path of knowledge[70]—a timid protest against the self-sufficiency of knowledge that was intensified in theistic systems into the proposition that works bring about mental purity and prepare the soul for illumi-

[68] Br. xiii. 7.3.1 ff.
[69] H. D. Bhattacharyya, Phil. Quar., Vol. III, p. 1 ff.
[70] Īśa. Up. 9-11.
[71] Br. Ār. Up. iv. 4.10.
See Radhakrishnan, *Ind. Phil.*, II, p. 626-635.

nation[27] and that was also possibly at the root of the idea that the fourth stage (*yati*) comes after one has faithfully fulfilled the obligations of the first three (or, at least, the first two) stages of life and thus paid the debts of the gods and ancestors and offered food to men and lower creation[28]. To win over those who could not abandon the conception of heaven altogether it was now laid down that heaven was a reward of good action but, that beings had to come back to earth again after the good fruits of meritorious deeds had been exhausted. The Jaina view that salvation could come only to man was tacitly accepted by the other creeds, for although the gods do not seem to be very unhappy, yet the sage is always extolled as better than they. In order to distinguish between heaven and salvation it was also generally accepted that while the former was full of enjoyment, the latter was preëminently an escape from pain. As a matter of fact, of the major systems of thought, the *Nyāya Vaiśeṣika*, the *Sāṁkhya-Yoga* and Buddhism favoured a negative definition of salvation as final cessation from all suffering, while Vedāntism and Jainism associated pleasure with salvation. One particular synonym of 'heaven' is significant, viz., *muktā*, which means not a blissful abode but a place where pain is absent—this may be the effect of the philosophical conception of salvation which had become popular in the meantime. Lastly, the theory of krama-mukti, according to which heaven is the first fruit of good action and from there all enlightened souls would be released at the dissolution of the world-cycle, tried to effect a reconciliation between the karma-ideal and the jñāna-ideal in moral action. The Buddhists too had their *anāgāmin*—a non-returner, as distinguished from the ordinary mortals who come again and again, the *srotāpanna* who are in the stream of saving knowledge, and the *sakṛdāgāmin* who have to return only once more to earthly existence.

[27] See Keith, *Rel. & Ph. of V. & Up.*, p. 577.

[28] See Keith, *Rel. & Phil. of V. & Up.*, p. 578 n. 3.

The last way in which the fruits of action could be avoided was *karmasannyāsa* or *karmaphalatyāga*—an ideal which also acted as a reconciliation between karma and jñāna. Since work is unavoidable and since it is bound to bring its result according to the law of karma, the sage would be well advised to find out some method of disposing of the accruing fruits of action if he cannot suspend all activity. In this he must follow the ideal of the Lord who acts and is yet not affected by its fruits. This, in the case of man, is done by means of renunciation of the fruits of action and performing duties for their own sake without any hope or expectation of reward[10]. But, since work becomes useless only through self-knowledge and as all persons are not capable of that illumination, an easier method is to dedicate the fruits of action to God who is not affected by the results of His own action, much less by those of others. Thus by surrendering the fruits of one's actions to God—in fact, by feeling as if God is acting through him—a man may escape the consequences of good action and attain salvation. Of course, it is not possible to transfer the fruits of bad action to God in this way, but a sinner could in later theistic cults take refuge in God (just as he could at all times expiate for his sins in various ways and lessen the rigour of future suffering)

The principle of surrendering the fruits of action was bound to raise important issues. Could a similar transfer of the merits or demerits of one person's actions to another take place here on earth? Could the good actions done for the spiritual benefit of a departed person really affect his destiny in the hereafter? Could one man sow and another reap? The sacrificial cult had familiarised two types of transfer. When a number of persons had to co-operate in the performance of a sacrifice the total merit was shared by all, although each was in charge only of a portion of the sacrifice. Secondly, the principal who engaged the priests enjoyed the fruits of

[10] *Bh. Gītā* ii 47; iii 30; iv 41; v. 10-13; xviii. 2-12.
Warren, *Buddhism in Translations*, p. 216 ff.

the sacrifice although the actual work was done by the latter. The priests were paid for conducting the sacrifices and suffered the consequences of neglect and error, but they were merely agents for the yajamāna and by suitable expressions they transferred the accruing merit to their principal. The distinction between *parasmaipada* and *ātmanepada* effected this and an initial sankalpa made clear that the work was done in the spiritual interest of a patron. This was specially true of all *kamya karmas*, for *nitya karmas* required personal exertion and their omission entailed sin.

The principle was extended to familial and political relationship, and not only voluntary but also involuntary transfer of merit and demerit began to be believed in. The organic conception of family relationship led to the view that parents and children (especially, fathers and sons) and also husbands and wives, were so intimately related that the merit or demerit of one class could affect the other class spiritually. The wife formed one personality with her husband and was supposed to share the merits of his good actions. When she lost her independent status in religious service she became a *sahadharmini*, either in the sense of performing jointly with her husband all religious duties[1] or in the sense of sharing the results of his good actions. Marriage was supposed to be her sole sacrament and she was supposed to share the fate of her husband, so much so that in order to ensure that she should reach the same realm as her husband the system of *sahamarana* was recommended and sometimes enforced. It may at once be pointed that this was a survival of the much more ancient and widely spread belief that the husband needed a wife in the next world as in this,

[1] *Rāmāyaṇa* ii. 27.4-5
Manu, ii. 67; v, 165, iv. 22 and 30.
Macdonald, *Dr of the Vedas*, ch. xvi.
Ait. Br vii. 15.
Śrāddhakriyākaumudī (Bib. Ind), p. 428
Smṛticandrikā, Śrāddhakāṇḍa p. 98
Hopkins, J. R. A. S., 1906, p. 587.

just as he needed food and weapons and servants and attendant animals there, and accordingly not only the wife but also all these things were originally buried with a dead man or their symbolic substitutes were put in his grave[33]. It certainly went against the karma doctrine, for it meant that, irrespective of the destiny which the woman had earned by her own merit, she was tied to her husband here and hereafter alike (and the marriage knot began that joining of fates unto eternity). Possibly the idea was that the merit of a woman dying with her husband would result in benefit to the soul of the husband also. Did not Satyavan and Cyavana benefit in longevity and youth here below through their virtuous wives, and was it improbable that the virtue of wives would prove the redemption of sinning husbands provided they could claim their destiny simultaneously with the latter by dying with them? But, while the transfer of merit was freely advocated, the transfer of demerit from the husband to the wife or *vice versa* found less support. This latter was however supposed to operate in the case of sinning parents who could infect their posterity by their moral lapses. Like hereditary diseases sins could also travel down, and this was supposed to take place when there was doubt as to whether a single generation could or did expiate a heinous moral offence. This doctrine too was not in strict accordance with the moral law, for it meant that one could be made to bear the burden not only of one's own inequities but also of those of previous generations. Here again the sin was not supposed to travel up and infect earlier generations. The tale is often told of Ratnakara who, before he became Vālmīki used to waylay and rob and kill people to maintain his family and whose eyes were opened only when at the suggestion of a sage he asked his aged parents whether they were sharing his sins and they replied in the negative (and so did his wife

[33] Kaiḍ, *Rel. of Ph. V. of Up.*, p. 425.

H. D. Shamacharyya, Phil. Quar., Vol. V, p. 4.

too)[55]. On the other hand, a voluntary transfer of merit is not unknown and although the receiver is not favourably viewed, the principle was acknowledged in some exceptional cases[56].

We shall deal presently with the position of a male issue in connection with this part of our enquiry. There is one other relation in which transfer of merit and demerit was supposed to operate. When disasters overtook a realm or premature deaths began to occur, it was generally believed that such widespread calamity could not be due to the sins of individuals. The king was generally supposed to have failed somewhere in the discharge of his kingly duties and permitted prohibited acts to take place either deliberately or through ignorance, and as a consequence thereof his subjects had to suffer the results of his bad action. Conversely, when he governed well and enforced the due observance of rules by his subjects, there was no drought or flood, no epidemic or untimely death, and the people under him lived in peace and plenty[57]: they enjoyed the fruits of his meritorious action. The duty of punishing the wrong-doer was so paramount that if a king forgave a thief who had announced himself as such and solicited punishment by means of a club that he had himself carried to the court, the

[55] Keith, *Rel. & Ph. of V. & Up.*, p. 179
Hopkins, J. R. A. S., 1907 pp. 667 f.; also, 1906, p. 189-190
§ Br. vii 4.1.1
Br. Ār. Up. I 17
Kau. Up. ii. 11(7); iii. 15.
Manu, xi. 198.
Skanda Pur., Prabhās-khaṇḍa, adhyāya, Avanti-khaṇḍa, chap
Kirtivās's *Bengali Rāmāyaṇa*, pp. 7 f. (D. C. Sen's Ed.)
[56] Hopkins, J. R. A. S., 1906 p. 188
[57] MBh. xii, 92, 34.
Jātaka No. 194.
Rāmāyaṇa, vii. 11 17-21; vii. 68 10. (Kirtivās's *Bengali Rāmāyaṇa*, p. 194. D. C. Sen's Ed.)
Cārūcā Sandhuk Vināsaghāna, ii 21 (even the sins of the king's subordinates may affect the subjects).
See *Uttarādhyayanasūtra*, Ass. II.

chief was freed from all sins but the demerit was now transferred to the king[36]. As against this, the king also shared in the merits of his subjects. The sages who did not pay the customary one-sixth of their income contributed a sixth of the fruits of their religious merit to the king in lieu of protection received[37]. It may also be noted in this connection that a similar transfer of merit and demerit took place when a guest failed to receive hospitality, for an unsatisfied guest left the burden of his sins on the uncharitable or careless host and took away his merits. The tradition goes back to the times of the Brahmanas and provides the first version of the story of Naciketas and Yama[38].

This doctrine of spiritual benefit by transfer or vicarious acquisition, so contradictory to the karma doctrine proper, received its greatest elaboration in connection with the cult of the departed. The śrāddha system, though it can claim as hoary an antiquity as the karma doctrine itself, had really an independent history of its own; and although it is difficult to disentangle it from the faith of millions at the present day, it may be asserted without any hesitation that the two doctrines are absolutely ill matched. The śrāddha ceremony is based upon the assumption that it is possible for a later generation to benefit an earlier generation spiritually irrespective of what the latter had acquired by its own exertion as its moral destiny. It also generally assumes that the departed is not embodied immediately after death, although the system need not always make that assumption. The karma doctrine proceeds on the assumption that one reaps what one sows and does not wait for funeral oblations to fill up one's attenuated ghostly form to get an embodiment. It may concede that good actions produce blissful residence,

[36] Manu, viii. 316.
See also *Mahābhārata Tīrtha*, xi. 18 and 20.
[37] Manu, viii. 304-8.
Abhiṣekanāṭaka, Canto. II.
[38] Manu, xi. 100.
Taitt. Br. iii. 10 ff.
Kaṭha Up. Bk. I.

but it can never accept the view that, while in another world, a being can be saved by the good will of a dutiful descendant without any illumination or merit of its own.

The system arose by accentuating certain elements of earlier thought[1]. The two paths, the deification of men, the conception of the *pitarah*[2], who were really a different creation like the gandharvas, the asuras and others in Vedic speculation, the system of cremation and oblations to the *pitarah* for secular benefit as to the gods provided enough material to make an elaborate system possible. The departed or *pitṛs* were identified with the *pitarah* and offerings to the former in the hope of receiving benefit changed gradually into oblations meant to benefit them (although the old idea that offerings to the manes produce prosperity to self also persisted in later thought)[3]. Gradually the idea developed that without proper nourishment the departed ancestors, in whatever form of existence they might be, wane in strength (and work injury to the defaulters) and may even lose their high status[4]. The *linga* is vertically transhabitantated into food appropriate to each kind of being in which the ancestors might be—to gods, to man, to animals, to plants and even to creatures in hell[5] in whichever form the departed might be [illegible] the fruits of their action. So, from Brahmā to the blade of grass, the whole creation must be appeased by offerings periodically, and at least once a śrāddha at Gayā must be

[1] Kaith, *Rel. & Ph. of V. & Up.*, p. 412.
Ait. Br. iii. 11
Tait. Br. II. 3.1.1.
Mahābhārata Tat., xlviii, 58 59.
Vāyu Purāṇa, x.
[2] Keith, *Rel. & Ph. of V. & Up.*, p. 413 [illegible] p. 421
Śrāddhakriyākaumudī (Bib. Ind.), pp. 74, 242, 257
[3] Keith, *Rel. & Ph. of V. & Up.*, p. 412, p. 421.
RV. x. 16.6
Raghunandana, *Smṛtitattva*, Vol. I, p. 255 (Jīvānanda's Ed.)
Śrāddhakriyākaumudī (Bib. Ind.) pp. 245, 394
[4] *Smṛtimuktāvalī*, *Śrāddhakāṇḍa*, pp. 2, 298;
also pp. 145-55.
See also *Śrāddhakriyākaumudī*, p. 274.

performed for the liberation of suffering souls. There is a curious mingling of ideas in the śrāddha ceremony. On the one hand, there is the idea that departed souls are not exactly where filial piety would wish them to be and so they must be helped to gain a better status, if not final release also, without coming to this world. There is also the idea that they have gained a good status which they can retain only by the regular offering of piṇḍas and a failure of the family line will mean a *loss* of that status[42]. From this second conception follow two important consequences, viz. that every girl should be married before puberty or her ancestors will drink her menstrual flow and also that every man's duty is to beget a male child, which again led to the custom of polygamy on the failure of male issue by the first wife and the disposition of property according to the right of offering piṇḍas (together with the system of adoption in case of a failure of a male child)[43]. The whole system probably gained an impetus from the alarm that the community felt at the excessive donning of the yellow robe without entering the householder's life, which Buddhism popularised as the surest method of attaining salvation[44], for it was rightly felt that thereby the source of all ascetics was being dried up, for after all some people must marry if the whole race was not to be extinct; and an extinction of the human race did not mean a wholesale salvation of imprisoned souls for the lower forms would still persist and keep souls in bondage of a more rigorous type with no early prospect of redemption[45]. The third factor that operated in the system of śrāddha was the idea that the ancestors had become gods (or demi gods) and as such deserved worship in the form proper to them

[42] *Śrāddhakriyākaumudī* p. 360
Abhinandakalpataruśākhā, Canto VI.
Vaiṣṇava Purāṇa, II
[43] *Sir Kr Ras.* p. 491.
See Gautama pp. 6-7.
Compare Br. Up. IV 4.22.
[44] *Warren, Buddhism in Translations*, p. 421, pp. 443 4
[45] *Manu*, III. 77 & 78

just as the gods had to be worshipped in their own way. For pious offerings made to them they would reward their descendants with prosperity and happiness. Of the five great sacrifices (mahāyajña pitṛyajña is one, and separate rules were enunciated as to the way in which it was to be performed. The moon was supposed to be the residence of the Fathers, and this they reached by the path of smoke unless by spiritual illumination they could take the path of arcis and reach final release (sometimes residence in the sun was regarded as the final condition). Thence a return was contemplated in philosophical literature in the form of vegetables which nourish the body and prepare the transition to the next animate sentient existence[a]. But in popular thought the three generations which receive oblations by name are regarded as having become Vasus, Rudras and Ādityas—the demi gods mentioned together, along with such other deva gods in the Bhagavadgītā[b] and elsewhere. But the śraddha system had more in mind benefit conferred upon, than benefit received from, departed ancestors and it is this aspect that went seriously against the karma doctrine.

When once the principle was accepted, the ways in which benefit could be thus conferred were multiplied. Thus a charitable work of public utility could be set up in the spiritual interest of departed ancestors. Even a holy bath could release millions of previous generations if performed under certain auspices, although it is not clear what further benefit could be conferred by repeating the bath on a subsequent auspicious occasion, especially if the first bath has released the ancestral souls from their embodiments

[a] RV v 42.1.
RV ix 113.8
Bh G vi. 45 5
Keith R. & Bh. of V & Up., p. 191 ff
[b] Raghunandana, Smṛtitattva, Vol I. p. 190 (Ānandā's Ed.)
Smṛti candrika, Śrāddhakāṇḍa, pp. 299-300
(Bhavyya Purāṇa calls them Prakṛtamaṇa, Saṅkarṣaṇa and Vāsudeva —see Smṛtikaustubha p 371)
Bh. G., ix. 22.

absolutely. The system of periodical gifts to Brahmans for the same purpose also came into vogue. It is not to be wondered at that in due course the theory should be propounded that even the birth of a son saves a man from at least one type of hell (which involves the assumption that, in spite of all the good acts that a man may perform, he has to go to that hell for want of a male issue) without any reference to śrāddha or similar acts of filial piety. No wonder also that fervent prayers should be offered to the gods to bless the worshipper with a son before wealth and prosperity[46]. The Cārvākas had denied the possibility of any gift reaching the departed ancestors with the remark that food might in that case be reached to distant relatives by śrāddha. Filial piety resorted with the story of Kṛṣṇa who, in course of his fight with Jāmbavān for the Syamantaka gem, received offerings from his relatives, who had taken him for dead and was actually strengthened thereby[47]. Similarly, the merit of the other kinds of gifts made by descendants for their spiritual benefit were supposed to be credited to the accounts of the souls now enjoying the fruits of their own actions and to improve their status in after life.

The basis of all these diverse speculations about the possibility of benefiting departed ancestors is our uncertain knowledge regarding the time when, and the place where, the fruits of actions are enjoyed. Failing to explain the origin of initial differences, the theory took the eternity of the cycle of rebirths for granted for fear of involving God in partiality and only undertook to explain the diversities of class, longevity and enjoyment to be found in the phenomenal world (which however included the gods and the residents of other

[46] Ch. Up. III. 17 5; v. 89
Br. Ar. Up. vi. 2.13; vi., 4.
Śr. Kr. Kos p. 348.
See Cand. p. 403.
Mahānārāyaṇa Upaniṣad LXXIV
[47] Viṣṇu Purāṇa, IV, xiii.

realms)[13]. Now, the process of reaping the fruits of action was conceived in two ways. There was, first, the idea that, after one life has been lived well or ill, the individual concerned went to heaven or to hell (or to both in succession)—a belief which has travelled down from the Vedic times in an unbroken tradition. There is, again, the idea that after one life has been closed the moral results are enjoyed in an after-life and denizens of heaven and hell are only special cases of post-mortem transformation and are not to be regarded as having attained eternity of bliss or suffering. The theistic faiths advocated the first alternative after the oldest tradition, while the śrāddha theory accepted the latter alternative as the true description of the destiny of the soul. It is difficult to say what the strict karma doctrine would permit in this matter, for not unoften the idea is expressed that this world is the only karmabhūmi and it is here that creatures get their karmajanmas (karma-birth). In that case the Gītā simile must be pressed to the utmost and we must assume that the transmigrating soul makes a direct change of frame, leaving its last support to crumble into dust—wears a new garment after the old had become worn out. How exactly that is done we cannot say—whether, that is, irrespective of the pindas that are offered after death to fill in the ghostly attenuated frame or with the help of such pindas, but there are expressions to indicate that as by a leech, one support is abandoned in order to reach out to another immediately after. If we accept the view that birth

[13] Yoga S., II 13

Caraka believes in akālamṛtyu for certain reasons (Vimānasthāna, III 32 ff) and gives the following as minutiae against premature death—mantrauṣadhamaṅgalaḥ svastyayanaḥ prāyaścittopavāsamantrayajñapaṭupaṭhanaḥ (Vimānasthāna, III 35 ff)

See also Sūtrasthāna, XXV 2 ff and Śārīrasthāna, VI 33 (premature death) Indriyasthāna, XIII, 2 (pūrvarūpa as medicine), Śārīrasthāna, II, 28 ff (Karma as determining strong or weak constitution) Śārīrasthāna, VIII, 22 (maternal impressions as affecting birth)

In the Jaina system the eighteen karmas include āyus nāma, gotra and vedanīya—See Nalini & Ghose, An Epitome of Jainism, pp. 395–6

may be in any form from godhood to vegetable existence (even inorganic transformation), then going to heaven does not mean a discontinuity; but then the difficulty is that we are not told that a godly existence may have its own karma-phala to be enjoyed in a fresh rebirth, as the general supposition is that after such existence the individual returns to this world to get a new form, the heavenly residence being regarded as a pure enjoyment without karma and its attendant fructification. Similarly, hell is regarded as a pure suffering meant to work off the fruits of bad action, although a return from there with the influx of time was less clearly upheld[62].

We are indeed told that these different destinies are meant for different merits acquired here below; but that the whole matter was inadequately thought out may be shown by referring to cases where hell and heaven were successively enjoyed by the same persons and possibly a return to the earth was also added as the third stage of the journey of the same souls. For extremely grave offences hell was possibly the only residence prescribed and even slow and excruciating voluntary death by the fire of meehusk, instead of adding to an on account of suicide, acted as an expiating cause and lessened the rigours of hell-fire, but it is difficult to make out whether the soul could there improve its status by work or it was simply wearing out the effects of evil action by suffering and preparing itself for a low type of embodiment thereafter. Similarly, residence in heaven might be a mere enjoyment (although it was conceded by some, e.g., Samkara, that Brahma knowledge was possible to the gods) to be followed thereafter by a superior

[62] See Keith, *R. & Ph. of V. & Up.*, p. 574.
[63] Gi. II. 22.
[64] Br. Up. iv 3.35; iv 4.26; vi. 2.
Taitt. Up. ii. 8, Ch. Up. v. v 3-10.
Radhakrishnan, *Ind. Phil.*, II, p. 647, p. 694.
Katha Up., II. ii. 7.
See Immense Samkara's Comm. on Ch. Up. v. 10 5 7.
[65]

type of embodiment[53].

The relation of God to karma did not unfortunately solve the problem of embodiment satisfactorily. The later theory of a judgment after death does not figure much in philosophical literature which was mostly obsessed with the idea of a mechanical working out of the karma energy and as such had a tendency to emphasise immediate embodiment. But we are sometimes told that karma is inactive and that without a divine propulsion into matter karma might remain inoperative, just as in *pralaya* God might dissociate matter from karma and reduce the latter to a potential condition (kārmavasthā). The qualification, however, that God does not act without reference to merit and demerit fails to make the time-element clear[54], and hence the idea that departed souls may wait indefinitely for divine sanction to get into an appropriate frame is nowhere strongly advocated.

The relation of fruition to time was a matter of some discussion, it appears. Sometimes a classification of actions into three types according to the time of their fruition was made, viz., those that produced an immediate effect here *below*, those that produced their effects in a hereafter, and those that had no fixed time of fruition. Thus, a kārīrī sacrifice is meant to produce rain as a measure of general utility, and its effect must be produced immediately or it has no value. A similar sacrifice was meant to bring a village as a gift to an individual, and if it did not succeed, it meant either that the man's previous life was hindering the fruition of the effect or that some error had been committed somewhere. A Jyotiṣṭoma, on the other hand, could produce its effect only in a hereafter as it was prescribed only for those who wished to go to heaven. Lastly, some actions

[53] Hill: xxiii. 3.12-14.

[54] Br. Ar. Up. 3.4.16.

See Śaṅkara on *Vedānta Sūtra*, I iii. 33 (against Jaimini) and III, ii. 32.

[55] Radhakrishnan, *Ind. Phil.*, II., pp. 549, 698 & 743.

Siddhānta p. 76 (Chaukhamba Ed.).

Mukundadāsa's Comm. on Kena Up., I.

(citra) could indifferently produce an effect here or, failing that, hereafter. On account of the impossibility of destroying moral energy it must be presumed that they would produce their effect even after millions of kalpas[28] Particularly heinous acts could bring their punishment at once or within three days[29]: many stories are told of the dire consequences of a sage's curse that took place immediately, e.g., on Nahuṣa, Ahalyā, etc., and bereaved persons could similarly pronounce a curse that produced effect here below, e.g., Gandhārī, the blind *vṛddha* whose son Daśaratha killed. It appears therefore that, in addition to the sufferings preordained by the demerits of a past life, there might be afflictions due to actions of this life (unless it be held that the curse is only symptomatic of the maturescence of the fruits of past action itself, i.e., the curse itself is the effect of the actions of a previous life, just as it has been held that in the case of the incarnations of God the curse was secured to carry out an object already decided upon by them, e.g., the curse of Gandhārī to destroy the race of Yadu whose annihilation Kṛṣṇa had already decided upon)

The question was bound to occur as to how the effects of actions could be disposed of in subsequent births. Whereas it was admitted that the *vāsanās* could be beginningless and skip over intermediate embodiments and reappear as instinctive dispositions in appropriate bodily structures (e.g., the latent dispositions acquired in a bovine life could arise only when the cow form was again acquired, for otherwise there would be a commingling of instincts and man would eat grass) in a later birth, it was generally believed that the fruits of one life were enjoyed in the next—that as a

[28] *Karma Granthi*, p. 1.
Manu, xi. 44
Vāsi., xxii. 2-5
Gītā, xiv. 5.
Gunaratna on *Saddarśanasamuccaya*, Sl. 5 (Bib. Ind. Ed., p. 26)
Nyāyamañjarī, p. 274 ff. (Vizianagram Series).
[29] See Hopkins J. R. A. S., 1907, pp. 671-2.

matter of fact, the form of the latter was determined by the acts of the life just over. That the view was not universal can be proved by the different theories on the subject of fructification. Thus, it might be held (1) that one action determines many lives, (2) that one action determines one life, (3) that many actions determine many lives, and (4) that many actions determine one life. What is meant by one action is not clear, but the general objection to the first three suppositions, viz., that there would not be sufficient time to enjoy the fruits of all actions if each action either monopolises a single birth or determines many births, is understandable. On the supposition that many actions determine a single life it is possible to work off the results of a previous life in the next following. Inasmuch as the second life will have its own actions fructifying in the one following thereafter, every life is at once an effect and a cause (except when illumination burns up the seeds of rebirth) and must be conceived to result from the joint operation of all the acts performed in the life just closed. Even then the difficulty is to understand how acts of different kinds could produce a single effect. Is any particular life a compromise of the good and bad fruits or is it determined by the dominating type of act, good or evil? It is true that domination of different types was acknowledged, viz., extinction (nasa) as of bad (krsna) and mixed (sukla-krsna) action by good (sukla) action, casting away of bad action or slight admixture (avapagamana) of bad action with good in such a way that a minor expiatory rite is enough to kill the effects of bad action, and temporary suppression of one action by another more strong (cirarn avasthanam) but with possibility of emergence at a later life[27]. The last

[27] Vyāsa & Nāgojibhaṭṭa on Yoga Sūtra, II. 13

For the view that the last thought determines the character of the embodiment, see Bṛ. Up. 15-17; Ch. Up. III. 14.1, Bṛ. Ar. Up. iv. 4.5 and v. 15; Praśna Up. iii. 10 and Bh. G. viii. 6. See also Warren *Buddhism in Translations*, p. 218 f., and Keith, *R. of Ph. of V. of Up.*, p. 581.

position obviously implies that the fruits of action of one life are not all enjoyed in the next. As a matter of fact, the theory that yogins could assume many forms simultaneously to exhaust the fruits of their action in one life practically accepts the principle of multiple embodiment as a result of the acts of a single life, and the theory of *saṃsāra* as having no beginning in time and persisting through succeeding lives is also based on the same assumption. An intermediate form between single and multiple embodiment is met with in such cases as that of Yudhiṣṭhira who was made to see hell as a penalty of a single lapse (the lie about Aśvatthāmā's death) and then went to heaven for his merits obviously without being born in hell first and then in another birth going to heaven. The succession was completed in two different realms but by the same personality. In this respect it was like the succession of pleasures and pains in a single worldly life, which also is determined by the good and bad actions of past life. The exact order of succession cannot be foreseen in any case; in fact, the relation of the different fructifications (of past and present lives) was admittedly indefinite and was meant to cover up all cases where a result was expected and did not take place, proving thereby that an unseen hindrance of a past life was operating to frustrate the expected result of an action of this[16]. But the result was bound to take place in some life as moral actions could never go without their fruit. Orthodoxy protested against the Buddhistic doctrine of the transmission of the fruits of action of one individual to another as involving the double injustice of escaping the consequences of one's own action (*kṛtapranāśa*) and suffering the fruits of another's action (*akṛtabhyupagama*) and generally held fast to the doctrine of personal requital in one or more lives. Although it did not expressly invent tales about the good actions of lower creatures as the Jātaka fables did, it too did not deny their possibility and accepted the general principle that from

[16]*Nyāyamañjarī*, p. 273 (Vizianagram Series)

a lower to a higher form transition by voluntary effort was not impossible If circumstances should seem to be such that fresh activity was impossible as when a person dies prematurely in the mother's womb repeatedly, or is still-born, or gets such an embodiment as looks like a soulless existence, it may be held that sins of great intensity are being expiated without fresh opportunities being given to the individual to involve himself in further demerit. There can be no cessation of the operation of the latent deposits of action without suffering or enjoyment.

If the moral law is so inexorable in its operation, are there no ways of mitigating its rigours or counteracting the fruits of evil action? Men started with a handicap in life for birth is sinful and must be atoned for by various purificatory rites (samskara) The debts of the gods, saints, and ancestors must be paid. The various kinds of sacrifices and penances and daily and seasonal duties must be performed It is only thus that one fits oneself for illumination[50] Conditions were still more rigorous for those who had no right to the study of the Vedas, and for them a birth in one of the three twice-born castes was essential, unless like Vidura, they were helped by the merits of past life. It was inevitable that shortcuts to salvation should be proposed, and the whole popular practice of later times is really an attempt to make things more cheerful. The greatest havoc in the standard doctrine was made by the gradual reassertion of the omnipotence of God to be found in the earliest speculations Vaisnavism and Saivism vied with each other not only about the superiority of their own gods but also about the ease with which salvation could be obtained by professing their creed. Abject surrender and devotion (*prapatti* and *bhakti*) are required of all devotees—knowledge and work are both preparations for this consummation and may even be dispensed

[50] See Keith, *R. & Ph. of V. & Up.*, p. 480.
Radhakrishnan, *Ind. Phil.*, II, pp. 687, 704, 748.
Manu, II 26

with. Nay, God may even go out of His way to save one who has not deserved it by personal merit and even when extreme hostility to Him brings a well merited destruction at His hands, the sanctified death leads to salvation[60]. As a matter of fact, fallen gods generally choose to oppose God rather than obey Him so that He may be moved to destroy them and thus enable them to return to Him quickly. Nay, if the formal conditions of a worship are all fulfilled and *not* a *mantra* is uttered, Śiva may be pleased and grant salvation this is the burden of the story of the Śivarātrivrata where a hunter accidentally dropped a bilva leaf on a phallus below on a day dedicated to the god after fasting the whole day and thereby obtained salvation. Again, the earthly set of the god is so holy that, irrespective of what a man does, death in that chosen seat will take a man straight to the god's heaven. Benares is the eternal city of India because death within a certain area of it is sure to put a stop to all rebirth, whereas death on the opposite side of the Ganges causes an immediate rebirth irrespective of all good works done during the whole of life Holy rivers gradually absorbed a portion of the sanctity and could give salvation to those who bathed in them or died on their banks. Cremation at certain places was also efficacious in this respect; śraddha at certain times and certain places also produced the same effect. It is evident that we have now travelled far away from the strenuous life of self-discipline which philosophical speculations had laid down as the only condition of salvation. It is no wonder, therefore, that residence in heaven should return as the ultimate destination of the good soul and sectarian heavens should be set up. Buddhism had a similar fate in Japan where the Land of the God of Boundless Light was gradually set up as a

[60] See Keith, *R. & Ph. of V. & Up.*, p. 379
Hopkins, J. R. A. S., 1907 p. 670.
Radhakrishnan, *Ind. Phil.*, II, p. 694, n. 2, p. 705 ff, 747, 755, 759.
Bh. G. ix. 30.
Vṛ. Pur., IV. xv.
Kīrtivāsa's *Bengali Rāmāyaṇa*, p. 476 (D. C. Sen's Ed.).

special preserve for the followers of the Enlightened One. Sinful mortals could now rely upon a multitude of solicitous helpers and intercessors to back their moral efforts or help them in cases of moral failure. Even the wives of the gods could now help the sinful mortals by pleading on their behalf[71]. The gods on earth, if pleased, could now be relied upon to ensure a blissful future, and so the veneration of Brahmins and sages and gurus was one of the surest ways of getting a good future—even the debased and immoral practices sometimes associated with certain guru cults were supposed to give merit. Nay, the sacred animal—the cow—could now help man to win his heaven when she was pleased with his service. There is no doubt that the desperate devices to which later faith was put was due to the hopelessness of getting salvation by unaided effort, with karma deposits piling upon one another in successive births.

This also explains the development of the whole expiatory cult of later times. In addition to the positive function of bringing merit, good deeds could counteract evil deserts. Lustration (prāyaścitta) for all lapses, material and formal, could now take off the guilt of evil deeds and scotch the seeds of painful future embodiment. The old system of making a present of cattle to Brahmins could not be revived at a time when the nation had passed beyond the pastoral stage, and was substituted by a system of payment in coin to Brahmins. Restrictions that were either non-existent or lax were more stringently enforced in social matters, e.g., intedining, intermarriage, going abroad, etc., but at the same time provision was made for expiating the sins of transgression[72]. Pollution was now possible from all sorts of things and in all matters, and it was necessary to make pro-

[71] Vāyu Pur. V. x.

Macdonald, *Dr of the Vedas*, Ch. VI.

For the complaining attitude of Lakṣmī, see *Tattvatraya*, p. 98. (Chaukhamba Ed.)

[72] For expiations, see Manu, ii. 146, 228, 240-7 & Yājñavalkya, Prāyaścittādhyāya.

vision for absolution, especially from unintentional infringements. Life became more easy, no doubt; but it also became more formal, and the standardisation of punishment for prescribed offences did nothing to mitigate the formal character of moral and social guilt and its expiation.

With the gods in favour and the possibility of counteracting the effects of demerit in men's own hands, it was now possible to baffle the fates. If the Jyotiṣṭoma sacrifice produced demerit for killing animals, it could be freed from that by a small prāyaścitta. If there was any risk of not obtaining a good future state on account of a loathsome bodily disease, a prāyaścitta would remove that obstacle. If one has touched the dead body of a person of a lower caste and thus polluted oneself, a minor prāyaścitta would counteract that evil. For deliberate and grave offences more painful prāyaścittas were ordained, and a distinction was drawn between major and minor lapses, as between *ghāti* and *aghāti* karmas in Jainism, and the heinousness varied with the class to which the person belonged. Penances of different types, originally meant to add to one's merits, were also prescribed for the expiation of sin; but the older idea of sacrifice and penance and austerities survived in the cult of fasting and abstinence which even a householder is enjoined to practise on occasions and sometimes for days together. The popular idea that pilgrimage should be performed on foot, and not in comfort, has the same implication, namely, that some sacrifice of one's accustomed ease is necessary to gain good fruit of one's endeavour. But the later idea of penance was to swell the credit side of one's account with the gods in the hope that, after all small lapses have been paid for here below, they will not produce their bad results in a hereafter. In this way karma might negate karma and mana might not be a great necessity.

But even here the fates could be controlled. While it is not possible to vary one's class (although the case of

Nahusa is an exception), it is possible to lengthen the span of one's life by propitiating the gods. If, through the clever ruse of a wife Savyavan could get back his life and, through the forgetfulness of the sages and their subsequent taunts, Markandeya could prolong his life, there is no reason why a man should not be able to do the same himself, provided he knew what adverse powers were conspiring to end his life. Thus astrological speculations began to dominate men's action, and it was freely believed that it is not what we have sown but how we are born that determines our future (unless it be thought that birth under those auspices is itself an effect of previous karma and thus the time of birth and subsequent career are co-effects of the karma of previous life). We can now predict to a nicety what is in store for us and get rid of minor ailments, at any rate, by a timely propitiation of the hostile powers. *Grahaśānti, mantrayana, kavaca* and *ratnadhāraṇa* may all be utilised for the same purpose, and mothers and wives can fast to prolong the life or ward off the danger of a relative whose stars are against him. On the other hand, a man may risk his life by an inauspicious journey, say under Magha or Aslesa or on a Tryahasparsa day or on a Pratipada tithi, irrespective of what his karmas have decreed. Superstition spreads quick: even the innocent house-lizard's tick or a friend's call or sneeze at the moment of departure is supposed to endanger life if unheeded. In all these popular superstitions there is not much scope for the acceptance of the rigid karma doctrine that longevity is determined by the previous life's karma, for it is tampered by the theory that good actions done in this life may also bear fruit and counteract the forces of the karmas of a past life. It is thus that the lives of millions are swayed today.

The theistic faiths, by their insistence upon worship and surrender and the omnipotence of God, kept up the efficacy of certain types of work, while implying that God is operative in our deeds and thoughts and impulses and is also able to stop the operation of karma if He so chooses. He brings

about dissolution of the world at His own will and restarts the world process when He pleases, although a coincidence of the destruction or origination of all creatures is not probable in accordance with the karma law. When He seems to subject Himself to that law, as when He invites a curse on Himself, it is all a mere show[86]. His grace may operate without reference to merit or personal effort. The knowledge that ultimately counts is that which culminates in devotion, and even if self knowledge be absent, the religious feeling does not go without its reward even in the case of the uneducated who offer their daily prayers to the village gods carved by human hands.

The philosophers, on the other hand, emphasised the inactivity of purusa, and, in the Sāṁkhya system, they went so far as to assert that it is Nature (*prakṛti*) that really acts, is bound and released—that the soul is never in bondage and is therefore not in need of release. Like a mirror temporarily obscured by dust or the sun by the clouds, the soul seems to be merged in *avidyā* and *saṁsāra* while in reality it is ever pure, illuminated and free. This extreme position makes short work of the whole doctrine of karma, and the forced attempt to involve purusa in the vicissitudes of the *buddhi* or the thought-substance, which is a phase of *prakṛti* leaves, one unconvinced. But it is this doctrine of the inactivity of the self that dominates all philosophical thought, and even the Nyāya system, which began with *pravṛtti* as a quality of the soul, materially modifies its position by asserting that in the condition of salvation the cessation of the contact between mind and soul leaves the latter very much in the condition of an unthinking substance, and so also Vaiśeṣika mukti has become a by-word among philosophers as it compared the saved soul to a piece of insentient stone. The Vedānta position of Śaṁkara had a similar effect upon the true nature of spiritual activity, for it negated the value of action in a world

[86] Radhakrishnan, *Indian Phil.* II, p. 694.
Tattvabodha p. 113 (Chaukhamba Ed.)

wholly illusory and held up absorption in Brahman as the ideal of all thought and deed. To it the ideal of life is that of Jadabharata who was born with the knowledge of the transitory and illusory character of all things and therefore ceased from all activities from birth[16]. Paradoxically enough, it is the cult of sacrifice that emphasised the reality and efficacy of personal action and the pleasure to be obtained from good deeds.

The above sketch, it is hoped, will show that the doctrine of karma had neither a single beginning nor a single growth. All through its history, it has assumed diverse forms according to the emphasis laid upon its different elements, and today it is difficult to say which is the pure form and which debased. Philosophy, worship and sacrifice—jñāna, bhakti and karma—are inextricably woven into its texture; and popular belief, instead of trying to be logical, has accepted without criticism all the factors together without bothering about their compatibility, just as it accepted the mixture of Sāṁkhya and Vedānta in the Purāṇas. It would be a mistake to think, however, that Indians live less strenuously because they have the comfortable theory that one life ill lived does not matter when there is eternity before them to make good all moral faults. On the contrary, the consciousness that birth itself is a token of sin has made them hanker after immortality. Nay, even exemption from sin has been promised to those who would fight evil and oppression[17]. Even atheistic Buddhism followed an ideal of life which has not been excelled so far as morality is concerned. The time has come when a rethinking of the whole problem by a master mind has become an urgent necessity although it is not expected that popular life or religion will ever be completely swayed by the canons of pure logic.

H. D. BHATTACHARYYA

[16] *Bhāgavata Purāṇa*, V, 9.
[17] *Rāmāyaṇa*, vi. 115. 45.

THE PSYCHOLOGY OF NAVADHA BHAKTI

During the long course of untold centuries Hinduism has moved forward, with all the dynamic force of a living Faith, from point to point under the stress of great psychical changes that have influenced the life history of India. It has derived its sap and vitality from the tap-root of Ancient Wisdom which earnest and devout seekers after Truth have enriched from age to age. To follow the march of the Hindu Mind through all the ringing groves of thought, to understand something of the long travail of the Hindu heart in its search for God, cannot but inspire the deepest respect and sympathy for its struggle. No religion in the world save Hinduism has produced a richer literature or one instinct with sublimity of thought and grace of expression. To dip into this wealth, to know something of its choicest gems should be a duty and an inspiration to every pious Hindu

In order to grasp clearly the rhythmic procession of our spiritual history we should study it in its psychological setting, in the light of those psychological principles which have governed from age to age the great movements of our spiritual thought. Broadly speaking, we find one phase of Hinduism dominated by the ideal of Jnana—the quest of Truth for its own sake,—and another by that of Upāsanā—love and adoration of the Highest. During these alternations of Jnāna and Upāsana we come across times in which Jnāna becomes static and Upāsana becomes crystallized into Karma, formal and external rites and ceremonies. Accordingly, we have in Hindu religious thought three great departments of study and methods of spiritual discipline, namely, Jnāna Karma, and Bhakti. "For the spiritual uplift of men," says Śrī Krsna in the *Bhāgavata*, "I have expounded three

"Yogas', Jnāna, Karma and Bhakti; there is no other method of spiritual fulfilment."[1]

These ideals of our religious thought and discipline are regarded as complementary of one another; they form an organic whole and are inter-dependent. They act and react upon one another. If they are properly co-ordinated and practised they lead up the aspiring soul to its divine destination. All the three 'Yogas' must work in unison for the uplift of the soul. But, if one 'Yoga' is followed to the exclusion of others, if for instance, Karma—the formal, ceremonial and institutional religion—is practised without taking light from the philosophies of Truth and of Love, the spirit of man is bound to become 'cribbed, cabined and confined' and lose its capacity for an fuller self-realisation in the True and the Beautiful. We are therefore, repeatedly exhorted in the Upanisadic and the Gītā that *Karma-Kānda* is not an end in itself and that its real efficacy lies in its being a means to self-purification and spiritual enlightenment. The Lord's Song condemns the attitude of exclusive devotion to the mere ceremonial forms of religion divorced from thought and faith in the following unequivocal terms:—

"But undiscerning men who deck
Their speech with verbal flowers,
With scripture phrases, and proclaim;
"The total truth is ours"
Who long desires, who aim at heaven
New births, rewards the swarm
Of lordly luxuries that flow
From duties multiform,
Who love their lordly luxuries
With passion overwrought
These have no wisdom resolute,
They know no centred thought.

[1] 'योगाचारो मता लोके तथा ज्ञेयो विचिन्तया।
कर्मं कर्मं च भक्तिश्च योगाश्चोक्तास्त्रिधा किंचित्॥' भागवत।

For scripture deals with objects.
Superior to this
Pure goodness be, not glad nor grieved,
Calm, free from avarice

For scripture, to the Brahman who
Discerns and understands,
Has just such value as well
In over flooded lands."[1]

The Gita Ryder's Trans.

When religion becomes a mere cult—a set of customary rites and observances unenlivened by knowledge, meditation and faith—it loses its promise and potency. When *Karma-kanda* becomes an end in itself, the clear stream of rational faith loses its way in the dreary desert sand of dead habit. It is then and not till then that priests, blind leaders of the blind begin to dominate society, retarding the progress of the human spirit towards its pursuit of Truth. The Gita says rightly that our Veda is not Veda-Vada or the flowery speech of the unwise priest. Hindu history gives continual evidence that our Veda does not allow thought to sleep on the soft cushion of crystallised custom for long, that priests have never been all in all, and that poets and philosophers, seers and saints, have appeared in unbroken succession holding aloft the torch-light amidst the encircling gloom and guiding our footsteps from

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[1] यावानर्थ उदपाने सर्वतः संप्लुतोदके ।
तावान्सर्वेषु वेदेषु ब्राह्मणस्य विजानतः ॥ —गीता, २ ।

"The unreal to the real,
From darkness to light,
From death to immortality."

In pursuing the history of India's spiritual quest, the fact should never be forgotten that Poets, Priests and Philosophers have built up brick by brick this marvellous Palace of Art known as Hinduism for the aspiring soul.

Hinduism—A Synthesis of Jnana, Karma and Bhakti

It is worthy of remark that Hindu methods of spiritual discipline centring round their philosophy of *Jñāna, Karma,* and *Bhakti* are perfectly in accord with the psychic nature of man who is a complex of Intellect, Will and Feeling They are rightly called 'Yogas'; they are related to life. According to the Gita, Yoga is skill in actions, the stuff of which life is made— 'योग: कर्मसु कौशलम्' They must, therefore, satisfy the needs of man's whole being. The important point to note is that man is neither *pure feeling* nor *pure reason.* The feeling element in religion, though preponderant, cannot be mere feeling It cannot be dissociated either from thought or action. All psychic processes involve the subtle play and interaction of thought and emotion. The truth is that feeling and reason must work together inseparably in the process of our spiritual development. We cannot afford to eliminate altogether the intellectual element from spiritual life. Nor should we regard religion as a mere affair of the intellect. To Hegel, Religion is truth conceived in concrete, pictorial, metaphorical forms, while Philosophy proper is the same truth stripped of its sensuous clothing and interpreted in terms of pure thought Others, again, have defined religion in terms of the moral will. Arnold's famous dictum is —'Religion is morality touched with emotion.' According to Kant, Religion is the recognition of all our duties as Divine Commandments. The poet Wordsworth interprets Reli-

gion in terms of the Moral Law expressing the idea in the famous lines—

> 'Stern Lawgiver! Yet thou dost
> Wear the God-head't most benignant grace.'

According to Rudolf Otto, the essential feature in religion is the 'Creature feeling', the feeling of self abasement before an Awful Power, mysterious yet having in it something strangely fascinating and attractive. Each of these definitions of religion, no doubt, contains an important element of truth, but does not exhaust the richness of its meaning. Religion as the deepest expression of our noblest ideal, must needs strengthen our moral will, must satisfy the demands of reason and at the same time, must bring comfort and solace to our yearning soul, for

> 'The Thirst that from the soul doth rise,
> Doth ask a drink Divine.'

Feeling Element in Religion

While we have to give full play to our moral will and intellect for the full fruition of our spiritual life, we cannot lose sight of the fact that it is necessary to appeal on all the lofty concerns of man's moral and religious life from the intellect to the heart. Even while the intellect displays itself in its full glory, the heart still pines for 'that something afar from the sphere of our sorrow.' The way to find God is not through the avenue of reason, though reason may save us from many a pitfall, but through the way of ardent faith and feeling[2]. The poet seer Lord Tennyson bears testimony to the truth when he sings in organ tones:—

> 'A warmth within the breast would melt,
> The freezing Reason's colder part,
> And like a man in wrath the heart,
> Stood up and answered 'I have felt.'
>
> *In Memoriam*

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[2] [illegible]

Another poet gifted with a like vision and faculty divine, utters the same truth in the solemn notes as follows:—

'Away, haunt not thou me,
Thou vain Philosophy!
Little hast thou bestowed
Save to perplex the head
And leave the spirit dead.
Unto thy broken cisterns wherefore go,
While from the secret treasure depths below,
Fed by the skiey shower,
And clouds that sink and rest on hill-tops high,
Wisdom at once and Power
Are welling, bubbling forth, unseen, incessantly.'

What Wordsworth calls 'principles of deeper birth' or 'intimations of higher truths' always come to us from our most inward feelings. Thus, says Lord Krsna in the Gita:—'By devotion he knoweth me in essence, who and what I am; having thus known me in essence he forthwith entereth into the Supreme'[1]. Feeling is the central factor in religion. It is the innermost core of our being—the very pith and substance of our self. Eliminate the feeling tone from our life of religion and it becomes cold, colourless, mechanical, lifeless. Religion captures the passion of the heart for God; it touches the inner susceptibilities of the human spirit and evokes an immediate response to all that is true, and good and beautiful. In all our spiritual seeking there must rule that spirit of loving devotion to our ideal which stimulates and draws forth all that is noblest in our nature.

What is Bhakti

The essence of true Bhakti lies in the soul's feeling of immediate contact and fusion with the Infinite. Bhakti yearns for a life in which all the chords of our being shall vibrate with the touch and embrace of Infinite life which is

[1] भक्त्या मामभिजानाति यावान्यश्चास्मि तत्त्वतः ।
ततो मां तत्त्वतो ज्ञात्वा विशते तदनन्तरम् ॥

Bliss Everlasting[9] Fired with imagination Bhakti expresses itself in the joy of service, in worship and meditation. The feeling grows with the growth of our knowledge; it widens with the widening of our horizons of thought. But it is always the urge of the heart, the consuming power of our affections which allures us to the brighter worlds and leads the way. Bhakti, says Śāndilya, is extreme devotion to God which comes after the realisation of His Glory: 'माहात्म्य ज्ञानपूर्वो सा परानुरक्तिरीश्वरे' It is knowledge of God as well as obedience to His Will: 'मामकीनं गृहीतो भक्तिदोष' Through Bhakti man becomes vividly conscious of his relation to God and feels more and more that his Sovereign Lord is nigh who deserves all his love and loyalty When the feeling of affinity, nearness and allegiance to Him grows upon the heart, there is 'a turning round of the eye of the soul', as Plato put it, 'from darkness to light, from the transient to the eternal'. With the awakening of this love-consciousness, the mind of man suffers the nature of an insurrection against the things of the earth, earthy Then follows '*Vairagya*,' non-attachment to the objects of sense, which is a necessary concomitant of Bhakti Devoid of self-renunciation and discrimination Bhakti degenerates into a mere blind rapture, an unchecked flow of emotion. But in its truest sense, it is not a carnival of feeling but an illumination of the soul suffused with the light of wisdom. Verily, to draw near God is to withdraw from the world of sense.

The Play of Emotions

The whole drift and purpose of Bhakti is to bring God nearer and nearer to men's vision and heart that he may grow more and more into His Image. Bhakti, like Philosophy, begins in wonder, the sense of awe in the presence of God's beauteous creation The sense of awe and wonder

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[9] सत्यो ! यह तन काठ तैंवरे का ।

[10] 'जल ज्यों जलेस्त तैंही निकसत राम इन्हूँ का ।' —कबीर ।

gradually develops into emotions of admiration, gratitude and reverence. In the play of these subtle, sweet, spiritual emotions man begins to feel that his life should be a perennial 'thanksgiving to the Power that made him'. Overpowered by the sense of wonder the devout man views with inexpressible delight the handy-work of God in Nature and is filled with adoring reverence for its Mighty Author on whose Command the heavens and the earth stand poised in their respective orbits[5].

In the first instance God is worshipped in His Omnipotent Glory with wonder-struck hearts. But as man rises to the higher levels of knowledge and purity the feelings engendered by the idea of God's Supreme Majesty (ऐश्वर्य) are replaced and transfigured by that of His Serene Sweetness (माधुर्य) which kindles his imagination finding vent into impassioned expressions of Bhakti.

Nine Forms of Bhakti

The Hindu exponents of Bhakti have subjected all such emotional expressions flowing from loving faith in and communion with God to a subtle analysis and have dwelt at length upon the methods of training the mind by a proper nurture of its finer susceptibilities into devotional moods. They have analysed the various notes of that spiritual symphony we call Bhakti, by which the soul attunes itself in increasing measure to the object of its loving adoration. They speak of nine forms of Bhakti which are really so many phases and stages in the evolution of perfect love for God.

They are summed up in the following beautiful verse of the *Bhagavata*—

'श्रवणं कीर्तनं विष्णोः स्मरणं पादसेवनम्,
अर्चनं वन्दनं दास्यं सख्यमात्मनिवेदनम्।'

The first stage in devotional self-culture is called *Sravana* in which the devotee seeks to establish communion with his

[5] 'एतमेवाऽऽनन्दस्य ब्रह्मणो मात्रामुपजीवन्ति विश्वानि भूतानि।'
बृहदारण्यक उपनिषद्।

Lord, hearing 'with the hearing ear and the understanding heart' all about His mighty Deeds and in listening to His Glories he rejoiceth. The process of *Sravana* Bhakti develops into an irresistible desire in the heart of the Bhakta to chant the Glory of his Lord. Like Suka, Nārada, Sura and Tulasi he pours out his full heart in profuse strains in the praise of his Lord. The third stage is called 'brooding', *Smarana* in which the idea of God constantly recurs in the devotee's mind. Prahlāda is cited as a typical example of *Smarana Bhakti* in the Bhāgavata[8]. In the next higher stage of Bhakti the devotee begins to feel the first thrill of Divine Life, and with it grows his thirst for losing himself in that life. The form of Bhakti implied in the term *Pāda Sevana* assumes an attitude of loving service dedicated to God. It is not some far-off Divinity to which worship and service are offered. Worship and service have to be offered to God who is immanent in His living Creation which the Vedas symbolise as the Feet of the Lord—'पादोऽस्य विश्वा भूतानि'. When the fifth stage of worship, Arcana is attained, the Bhakta rapt into still, sweet communion with his Bhagavān, begins to forget himself and passes into the sixth stage of '*Vandana*,' when he feels the presence of the Lord everywhere and in everything and, like Arjuna, begins to prostrate before all things[9]. When the Lord has become enthroned in his heart the seventh stage of *Dāsya* naturally follows in which whatever he does he does for the Glory of God. In this service mood of Bhakti he is obsessed by the sense, 'Lord! I am Thy unprofitable servant; not my will but Thine be done', Bhakti is, in essence, to borrow Royce's suggestive phrase, *a religion of loyalty*. It is the loyalty of heart, will and

[8] 'मा भक्तिरविच्छिन्ना विष्णौ स्वप्नावधारिणी ।
श्रवणादिलक्षणा सा च कृष्णे चाप्यर्पणे ॥'

[9] 'नमः पुरस्तादथ पृष्ठतस्ते नमोऽस्तु ते सर्वत एव सर्व: ।
'सर्वं यदस्यात्मनि सत्त्वमात्रे ज्योतिर्मयि सत्यमनन्तमीडे ।
सरित्समुद्राश्च हृदे, शरीरं यद् किञ्च भूतं प्रणमेदनन्य: ॥
भाग०, ११, ९, ८

thought to that ultimate reality we call God. The human spirit longs to come closer and closer to God, to feel His nearness and affinity and to find joy in His service. The attitude of self-surrender to the Divine Will is finely expressed in the following near little verse of Lord Tennyson who prayed:—

> 'Thou seemest human and divine
> The Highest, Holiest Manhood Thou;
> Our wills are ours we know not why,
> Our wills are ours to make them Thine.'
>
> *In Memoriam*

Verily, the Bhakta seeks his life's reward, 'Working as ever in the Great Taskmaster's eye'[8].

By *Sravana* and *Kirtana* and other acts of worship Bhakti becomes a constant mood wherefrom love and gratitude for God and His great attributes streams forth without let or hindrance from the human heart[9]. But the spirit of man ever longs to seek more and more intimate fellowship with God. The idea of a Transcendent God—'A Spirit beyond the Stars' does not enkindle that fierce, unfailing feeling response in one soul which demands a God, Who verily reciprocates our affections, Who makes us perfect in our human weakness, Who is the Way, the Truth and the Life[10].

Arjuna trembled at the sight of the Universal form, the Cosmic Picture, displayed by Sri Krsna and explained

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[8] [illegible]

[9] [illegible]

[10] [illegible]

"I am rejoiced with seeing what none before has seen. But my mind is quaking with fear; show me the same form (as before). Be gracious, O Lord of Gods! Home of the Universe!"

"With obeisance and prostration of body I crave grace of Thee, the adorable Lord; as father with son, as comrade with comrade, as lover with mistress, mayst Thou bear with me, O Lord!"

"I would fain see Thee in the same form as erstwhile: with diadem, with mace, with disc in hand; assume that same four-armed shape, O Thou of Thousands Arms, the Image of the Universe"[211]

Arjuna seeks to establish a more personal and closer relationship between himself and his Lord than that of mere master and servant. The distance and the dual sense which keeps God and Soul apart, yields place to a deeper love-union in *'Sakhya Bhakti'*—the devotion of a friend with a friend. In this higher aspect of Bhakti the Bhakta commends himself unto His guidance and feels that he is *saved from isolation;* that he is saved by surrendering himself to something which is dearest to his heart. In the superb language of the Upanisads the Bhakta and his Bhagavān at this stage are 'twin bright-plumaged Birds, boon companions, dwelling in love on the self-same Tree.'

'द्वा सुपर्णा सयुजा सखाया समानं वृक्षं परिषस्वजाते ।'

The Bhakta begins to walk with God as with his intimate guide philosopher and friend. He feels His living presence which is a vision, a challenge, a light to his eyes, a compulsion to his heart. At His call he breaks forth into a response like Arjuna in the Bhagavat-Gita :—"Infatuation is gone;

[211] अदृष्टपूर्वं हृषितोऽस्मि दृष्ट्वा भयेन च प्रव्यथितं मनो मे ।
तदेव मे दर्शय देव रूपं प्रसीद देवेश जगन्निवास ॥
तस्मात्प्रणम्य प्रणिधाय कायं प्रसादये त्वामहमीशमीड्यम् ।
पितेव पुत्रस्य सखेव सख्युः प्रियः प्रियायार्हसि देव सोढुम् ॥
किरीटिनं गदिनं चक्रहस्तमिच्छामि त्वां द्रष्टुमहं तथैव ।
तेनैव रूपेण चतुर्भुजेन सहस्रबाहो भव विश्वमूर्ते ॥ भ० गी० ११ ।

Right understanding is acquired by Thy grace, O Infallible Lord. I am waiting with doubts dispelled. I will do Thy bidding."

'नष्टो मोहः स्मृतिर्लब्धा त्वत्प्रसादान्मयाऽच्युत ।
स्थितोऽस्मि गतसन्देहः करिष्ये वचनं तव ॥' भ० गी० १८ ।

The ultimate phase of Bhakti is summed up in the term *Atma-Nivedanam*[1] which demands the final surrender of the devotee's self to Bhagavan absolutely and unconditionally. In the serenity of this higher faith and the ecstacy of joy that goes along with it, the devotee dedicates his whole being to God, and rises to those higher peaks of vision where he becomes completely absorbed into Him. He becomes God intoxicated. There is no longer self-love in him, since God has taken the place of self and his whole life is transfigured. Every fibre of his being begins to throb with divine life. If he is an emotional Bhakta he is all tears and cries and raptures. Such an ecstatic Bhakta was typical of Sri Caitanya and Sri Mirabāi. The Milk maids of Brindāvana are depicted in the Bhagavata as embodiments of this highest form of devotion to God. They are said to have kept the flame of divine love burning in their hearts at its white heat. They were so completely immersed in their love for Sri Kṛṣṇa that they felt His presence everywhere as a bereaved lover does for the sake of his beloved[2].

The blissedness of love-union between the Bhakta and the Bhagavan is sometimes heightened by the poignant sense of loneliness in separation from Him. The Soul's yearning for Him grows keener and intenser until they both clasp together in sweet communion in which thoughts melody—

Becomes too sweet for utterance and it dies
In words, to live again in looks, which dart

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[1] 'विसृष्टो जिनो विश्वजितं परिददाति भक्तजनं जगत् ।'
'सेवाभिगमनविधिना पुरुषवशाद्धेतिभिर्वशः ।
आत्मनः सञ्चये दीनो नापश्यत्पुरुषं हरिम् ।' भाग० १, ९ ।

With thrilling tone into the voiceless heart
Harmonising silence without a sound.

Shelley's Epipsychidion

Like a dumb man who can taste but cannot express his sense-impression, so is that love; it can be felt, but not described: एकात्मतादयवत्'(नारद भक्ति-सूत्र). In that state of supreme self-surrender to God the Bhakta enjoys the sweetest communion and feels the highest rapture.

Bhakti in its highest expression is illuminated vision and heightened activity, not a blind rapture nor an ineffectual sentiment. Yet, it retains a clear self-consciousness in its divine madness. It does not desire to be merged in the Impersonal Brahma 'like the dew drop into the silent sea', but longs to enjoy the bliss of affection.

Beautiful legends are told with the daintiest touches of art and picturesqueness of imagination in our Bhakti literature in illustration of these various forms and moods of Bhakti; lives of saints have been described according to the prominent characteristics of Bhakti or devotional attitude (विष्णु) which distinguishes each one of them. A verse in the Bhāgavata mentions the names of saints with particular reference to their special characteristics of Bhakti:—

"All these verily felt the joy of Divine communion. Parikṣita while hearing about his Lord Śrī Kṛṣṇa, Śuka while singing songs of praise, Prahlāda while musing and brooding, Lakṣmī while waiting upon the lotus feet of her Lord, Pṛthu while performing acts of worship, Akrūra in prostration the Monkey-lord in service, Arjuna in fellowship, Bali in absolute self-surrender"[18]

Sentiments in Bhakti

Forms of Bhakti have been distinguished by their characteristic *Rasas*, Sentiments, enumerated as *Śānta*, *Dāsya*,

[18] "श्रीकृष्ण भक्ते परीक्षिदभवद् वैयासिकः कीर्तने
प्रह्लादः स्मरणे तदङ्घ्रिकमलं लक्ष्मीः पृथुः पूजने।
अक्रूरस्तदभिवन्दने कपिपतिर्दास्ये च सख्येऽर्जुनः।
सर्वस्वात्मनिवेदने बलिरहो धन्यो विष्णुभक्तोत्तमः॥"

Sakhya, *Vātsalya*, and *Madhurya*. They represent ascending grades in their order here given, of the loving faith which is expressed by a holy man. '*Sānta*' is Bhakti in its simplest form, a mere resignation. In '*Dāsya*', it takes a more active form in the obedience which the devotee takes upon himself. *Vatsalya* implies an attitude of tender fondness for God as that between mother and child. There is more of personal touch and communion between a devotee and his deity in '*Sakhya*' Bhakti. In '*Madhurya*' there is passionate love which wells up from the heart surrendered to God. In this highest stage of Bhakti the grandeur and sublimity associated with the idea of God is thrown into the shade, it is still there, but in the height of love that aspect of the Infinite is over shadowed by the enchanting vision of that

> "Light whose smile kindles the Universe,
> That Beauty in which all things work and move."
>
> *Shelley*

We have no language but a cry of bewilderment to express the fulness of the joy felt in the presence of that ineffable Beauty by God-intoxicated Souls. The seers of the Upaniṣads have borne testimony to the same experience while declaring: 'Just as when a man is embraced by his dear wife he forgets the presence of the objects near him, so also when the spirit is embraced by the Universal Self, he knows nothing outside nor inside; for he has attained an end which involves the fulfilment of all ends'[14].

In the presence of that Vision Beatific, the Milk maids of Bṛindāvana stood aghast and cried out in joy—"What woman in all the worlds, O Beloved Lord, deluded by the sweet and ravishing strains of Thy flute could not be drawn away from the approved Aryan path. Having further seen this form most bewitching in the three worlds, who could

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[14] "तद्यथा प्रियया स्त्रिया संपरिष्वक्तो न बाह्यं किंचन वेद नान्तरमेवमयं पुरुषः प्राज्ञेनात्मना संपरिष्वक्तो न बाह्यं किंचन वेद नान्तरम्। तदा अस्य एतदाप्तकामं आत्मकामं अकामं रूपम्। बृहद्० उपनि० ४-३-२१।

keep it! For at the sight of this form cows, birds, trees and beasts stand bristling with joy"[21]. Verily, Bhakti in its ultimate phase culminates in the realisation of Truth in Beauty

Ethical Implications of Bhakti

Some Christian critics of Hindu religion characterize Bhakti as non-ethical in its tenor and tendency "The 'supreme peace,' 'the everlasting region' to which Kṛṣṇa brings his worshippers, says Macnicol, is no kingdom of God, no realm of the service of love in righteousness, but a self-regarding state of personal purification and endowment It is not, as the kingdom of Heaven is, *a kingdom of moral ends*, in which all private and selfish interests are for ever abolished. When it suggests, as so often Indian visions of the emancipated state suggest, that our centre of selfhood shall vanish into God's, it dissolves in cloudland, for the only eternal city of God is that where 'His servant shall serve Him,' built up as it must be upon the solidly abiding foundations of duty and of responsibility." *Macnicol's Indian Theism*, p. 260.

Contrary to Macnicol's misleading observations we find that the ethical note in the Gītā is pitched in a higher key; and that it inculcates the most unselfish devotion to moral ends. The end and aim of Bhakti can never be egoistic, the peace and rest of one's own restless soul The Bhakta has a double personality—the man in him is intensely active while the divine in him is supremely quiet. He is steadfast in wisdom 'स्थितप्रज्ञः', unswayed by passion, fear and anger 'वीतरागभयक्रोधः', full of pity and kindness, 'मैत्र करुण' non-violent 'अहिंसा सर्वभूतानां', free from I and mine consciousness 'निर्ममो निरहङ्कारः', devoted to the good of all beings 'सर्वभूतहिते रतः'. The greatest among the devotees,

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[21] "का रुण्यङ्ग ! ते कल्पन्वानतेषु गोत्तमोद्भितार्थचरिताः चलितैस्त्रिलोकयाम् ।
त्रैलोक्य सौभगमिदं च निरीक्ष्य रूपं यद्गोद्विज द्रुमलता पुलकान्यबिभ्रन् ॥
भाग० १० ।

according to the *Bhagavata* is one who beholds the Divine Self in all beings and all beings in the Divine Self[16]. Knowing that Hari is the Indwelling Spirit of all beings Paudits cherish the deepest love for all of them. The Bhagavata says elsewhere —"Saintly souls are greatly afflicted by the sorrows of the world, because that is the highest worship of the Divinity who is the Soul of all being"[17]. A life of Bhakti is a dedicated life consisting in spontaneously surrendering all actions to God whose Will is Righteousness and feeling the greatest mercy in forgetting him[18].

Pilgrims on the path of Bhakti have to lose their life in order to find it, efface their 'I' and surrender their 'mine'. Thus, sing Mahātmā Kabir and Rahiman —When 'I' dominated my inward self, Guru would not grace it by His presence. While Guru has been enthroned therein, 'I' has made its exit. Strait and narrow is the lane of Love where two cannot be accommodated.[19] —Strait is the gate and narrow is the way which leadeth unto life, and few there be that find it.

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16 'सर्वभूतेषु यः पश्येद्भगवद्भावमात्मनः ।
भूतानि भगवत्यात्मन्येष भागवतोत्तमः ॥' भाग० ११, २ ।
'पूर्णं तु बन्धिनीलोला सर्वभूतमयं हरिम् ।
विलसे सर्वभूतेषु बन्धिलस्यभिवर्तिनी ॥'
'अथ वा सर्वभूतेषु भूतस्थानं कृतालयम् ।
स्वदेहान्तर्गतं यस्य वैस्तादभिनयेन भोक्तुम् ॥'
'जनैरपि भूतानि सफलेद्वयकुमारवत् ।
ईश्वरो लोकरक्षार्थं प्रविष्टो भगवानिति ॥'

17 'शिवाय लोकस्य भवाय भूतये य उत्तमश्लोकपरायणा जनाः ।
जीवन्ति नात्मार्थमुदग्रचेष्टा वातेन वा यद्वदिहेङ्गितं जगत् ।
'तस्मात् लोकाकलेन यावत् शान्तिमेते तथा ।
परमात्मार्थं तद्धि पूजनमात्मिकाकलम् ॥' भागवत ।

18 'तदर्पितं विनिन्दन्तो तद्विस्मरणे परम व्याकुलाः' ।
नारद, भक्तिसूत्र ।

19 'जब मैं था तब गुरु नहीं अब गुरु हैं हम नाहिं ।
प्रेम गली अति साँकरी तामें दो न समाहिं ॥' कबीर ।

'When the beauty of the dearest of all dear things has overpowered the eyes, how can they be captivated by the glamour of sense-objects. The wayfarer has to retrace his steps for want of accommodation in the crowded rest-house.'

'चित्तत्तन दुनि नैनन बसो और दुनि कहाँ समाय ।
जो तसाय रहीस लुटि, आय अचिंत बिरि जाय ॥' रहीम ।

'O Krsna! so long as people are not yours, passion, anger and the like are their robbers, home is their prison-house, infatuation the fetters in their feet.'

Humility and meekness are typical of a life of self surrender, for God hates pride and loves meekness[10].

The true and sincere Bhakta has the beauty of flowers and their sweet modesty. As a little child he lies upon God's bosom always.

Blessed are the pure in heart, says the Bible, for they shall see God. The Bhāgavata strikes a clearer note when it says: 'The heart must be washed clean of its scum and dirt born of action and qualities and purified by the intensest devotion to the Lotus-feet of the Lord. As the clear vision beholds the radiance of the Sun, so the pure heart alone can comprehend the real *ātman*.' In the eyes of the Bhakta the moral law is not something external to himself, imposed upon him by an alien Power but an urge divine which impels him from within. He must become a law unto himself, in as much as 'love is the fulfilment of the law'. As a method of self-realisation Bhakti is, verily, revelation in knowledge, inspiration in art, motive in morality and the fulness of religious joy. Man, said Fichte very rightly, can will nothing but

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10 'तस्मात्कामादयः स्तेनाः तस्मात्तान्गृहं गृहम् ।
सेवन्ते सहसा निर्विगृहे यत्कुप्यते न ते जनः ॥
ईश्वरस्य ईशभिक्षायाद्विज्ञानं दुर्विज्ञानस्य ॥ नारद भक्तिसूत्र ।

'बुद्धिर्ज्ञानमसङ्गश्च सत्त्वं चोत्कर्षतो यदा ।
तेनोपरज्यते चित्तमेतद्धर्मकर्मभिः ।
तस्मिन्विशुद्ध उपलभ्यते आत्मतत्त्वं ।
साक्षाद्यथाऽमलदृशोः सवितृप्रकाशः ॥' भागवत

what he loves, his love is the soul and at the same time the infallible spring of his volition and of all his life's striving and movement. Those who know God best render unto Him the purest service.

The question may be asked: How can a man respond to the call of the moral ideal if he allows his mind to run riot in the emotional ecstacies of Bhakti? Immersed in the bliss of Bhakti he may turn a deaf ear to the still, sad music of humanity, and may shut his eyes against the tears and tragedies of human life. But we have to remember that Bhakti is not mere emotional rapture but a sustained and serene faith in the moral ordering of God's universe. Bhakti, indeed, finds its best nurture in the depths and not the tumult of the soul. Impelled by the idea of God being in all things and all things in God—हरिरेव जगत् जगदेव हरिः हरिणा जगतो नहि भिन्नतया—the Bhakta is filled with such a sweetness of temper and equanimity of mind that he resists not evil, overcomes evil by good and is perfectly non-violent even under the gravest provocation. He possesses his soul in patience in the direst misfortune 'सम्पदुत्तम शान्त शक्ती'. His spirit is finely touched to fine issues to a degree that he can never remain unaffected when he sees the sufferings of his fellow beings however low and depraved they may be—'सर्वतो दीन वत्सलः'. The life of Bhakti is not one of mirth and laughter but of sorrows and suffering. We recall the examples of Kuntī, Rantidevā and Prahlāda the ideal Bhaktas who would not accept the boon of peace and rest for themselves. 'O, Teacher of the Universe'! thus prayed Kunti, 'may there be sufferings and misfortunes in store for me here and there'[11]. 'I crave not the supreme goal with the eight perfections, cried Rantideva, nor an escape from the round of birth and death. I long for suffering, for a thousand and one heart-aches to which flesh is heir; nay, I long to suffer for all beings by living and moving in their

11 'विपदः सन्तु नः शश्वत्तत्र तत्र जगद्गुरो।
भवतो दर्शनं यत्स्यादपुनर्भव दर्शनम्'

modst that they themselves may be free from pain and suffering[22].

To sum up, the claims and the values of the True and the Good in the economy of spiritual life have never been lost sight of in our ideal of Bhakti which has, verily, been 'the anchor of our purest thoughts, the nurse, the guide, the guardian of the heart, and soul of all our moral being'

GANGA PRASAD MEHTA

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[22] 'न कालेऽहं गतिर्भविष्यत्यन्यमहर्षिसुकृतमनुगर्भे वा ।
आर्तिलवोऽस्मिन् देहे भाव्यतामः शिवो नेव अवस्था दुःखम्'
'न तावद् कालो दाहं न कर्म न पुनर्भवम् ।
कालो दुःखं अहाना प्रणिपातार्तिनाशनम् ॥'

भागवत ।

A HUMBLE APOLOGIA FOR MY ASTIKYA

The *astika* or believer in the Supreme Spirit has inevitably to face certain ancient and modern objections to *astikya* or theism, when thinking of the reasons for his faith or speaking of them to others. One of the most persistent and most challenging of these is the existence of pain, sorrow, disease, misery, and evil, physical and moral, both as affecting individual human lives and the collective existence of the race. I am not competent to effectively tackle the problem of their existence. I would only respectfully say that it would never do to explain it away as merely something negative or illusory, something which is a vanishing quantity, or something which humanizes, chastens and disciplines the spirit. Some of these there are which fall under one or more of these categories, but there are others which do not. And with the progress of what is called civilization, new forms of disease, misery, and evil are manifesting themselves. Neither those of them which have persisted from the past, nor those which are of modern growth, nor again those which may make their appearance hereafter, should or can be ignored or winked at. For the strengthening and deepening of his own faith and for fraternally convincing and helping others who raise objections or are perplexed by doubts, the *astika* or theist must face the task of explaining as best he may, why the world is what it is and reconciling its present condition and tendencies with what he believes to be the *svarupa* or nature of God, this word being used for the sake of convenience to mean the Supreme Spirit. But the believer must not lose heart or hope or faith, if he cannot give a wholly adequate explanation.

The belief produced by scientific knowledge is sometimes contrasted with religious belief. It is popularly thought that everything in science is definitely known and is beyond doubt. But that is a mistake. Some of the basic

hypotheses of science have been changing, and there are conflicting theories also. Einstein's theory of the universe is based on the principle that all motion is relative, regards space time as a fourth dimension, and invalidates previous conceptions of gravitation, the ether, geometry, and other matters. As to ether, or rather ethers, Sir James Jeans, F.R.S., writes in his book *The Mysterious Universe*, "that the ethers and their undulations, the waves which form the universe, are in all probability fictitious. This is not to say that they have no existence at all; they exist in our minds, or we should not be discussing them; and something must exist outside our minds to put this or any other concept into our minds. To this something we may temporarily assign the name 'reality', and it is this reality which it is the object of science to study. But we shall find that this reality is something very different from what the scientist of fifty years ago meant by ether, undulations and waves, so much so that, judged by his standards and speaking his language for a moment, the ethers and the waves are not realities at all. And yet they are the most real things of which we have any knowledge or experience, and so are as real as anything possibly can be for us." As to change in the hypotheses of science, it may be added that the researches of Sir J. C. Bose have led scientists to revise their ideas about the Living and the Non living and have tended to obliterate the line of demarcation between the vegetable and animal kingdoms.

In his lecture on "Science and the Unseen World" Prof. Arthur Stanley Eddington, F.R.S., confesses more than once in varying phrase, 'we do not yet understand how.' About the outline of the evolution of the universe and the world which he gives in that lecture, he says "Part of what I have described seems to be securely established; other parts involve a considerable element of conjecture—the best we can do is to string together fragmentary knowledge. Scientific theories have blundered in the past; they blunder no doubt

today; yet we cannot doubt that along with the error there come gleams of a truth for which the human mind is impelled to strive." Admitting all the errors in the scriptures, doctrines and practices of the different religious communities in the world, may it not be said of religion also, "yet we cannot doubt that along with the doubt there come gleams of a truth for which the human mind is impelled to strive"?

It cannot be said that science alone is progressive, religion is not. Sir James Jeans, F.R.S., no doubt, modestly says of scientists: "We cannot claim to have discerned more than a very faint glimmer of light at the best, perhaps it was wholly illusory, for certainly we had to strain our eyes very hard to see anything at all. So that our main contention can hardly be that the science of today has a pronouncement to make, perhaps it ought rather to be that science should leave off making pronouncements: the river of knowledge has too often turned back on itself". Still it cannot be denied that science is progressive. Similarly, religion also is progressive. For, not only since, and probably before, the dawn of history up till now have there been dissenting protestant and reforming sects, but even within the oldest religious communities reform and progress have been taking place by the silent dropping and elimination of outworn or injurious beliefs and practices and by the re-interpretation of doctrines and ritual in the light of advancing knowledge and of changing conditions.

The advocate of science may say that it is believed in and respected because of its positive achievements, because it has destroyed some superstitions, dispelled some fears, and promoted human health, convenience, comfort and welfare. But religion also has done the same and more. Since primitive times all that relates to man's individual, domestic, and wider group life has been connected with religion. All domestic and social institutions were originally based on religion, and inspite of retrograde and degrading elements, they have, under the influence of liberal and reforming reli-

gious ideas, made for progressive enlightenment and civilization, killing superstitions and dispelling fears of evil spirits, witches and a revengeful god. The earliest sanitary regulations, e.g., some of the Hindu *ächäras*, had a religious sanction behind them. Some yogic practices for promoting health and strength and prolonging life are connected with religion. The sacredness of family relationships and other social ties, and neighbourliness were and still are due to religious teaching and experience. These have purified, strengthened and sweetened human existence, making civilized life possible. Religion has raised man to greater moral and spiritual heights and to loftier idealism than anything else. Even communism—assuming that it represents a sound ideal, is not new. It existed among the Essenes and some orders of *Sannyasins*. No one knows how and when the cultivation of land, the use of fire for cooking and other purposes, the weaving of cloth, the building of houses, and other fundamental arts and crafts originated. But in primitive times and early civilized society, they were connected with religion—a proof of which is the survival of *Vasudhärma puja* among the Hindus. The achievements of science and mechanical invention during the last hundred years or so, ought not to make us forget the previous achievements which made the former possible.

It may be objected that religion is responsible for much intolerance, much bloodshed, much retardation of progress, much harm and suffering and degradation due to customs and practices having a religious sanction. This is admitted. But it should also be remembered that much that has passed for religion was not entitled to that sacred name, and many malpractices taking shelter under the cloak of religion had no religious sanction, or at any rate, no sanction of the most authoritative religious scriptures; as, for example, the immolation of widows, ban on widow marriage and the enjoining of child-marriage among the Hindus.

Science, too, had and has its superstitions which need

not be enumerated Guns and other fire arms of increasing destructive power, various explosives, shells, bombs, poison gases and other chemical poisons for killing whole armies, use of bacteriology for spreading epidemics among enemies, submarines, torpedoes, bombing aeroplanes, and various other means for making war more and more destructive, bear witness to the moral and material harm done by the abuse of science. This has led Sir Oliver Lodge to observe that man's moral growth has not kept pace with his progress in scientific and mechanical knowledge Nor is the wrong application of science confined to the sphere of sanguinary warfare. Economic warfare on the modern large scale is not less injurious than actual fighting. And it has been made possible by science. It is a favourite method of highly industrialized nations to kill the arts and craft of unorganized and backward people by dumping their machine-made products on the markets of the latter and keeping them unorganized and backward by iniquitous methods of political domination In fact, the success of Western and Japanese capitalistic industrial enterprise presupposes and depends on the existence of large masses of men in political or economic subjection or both, who are only to be consumers of imported machine made goods and producers of raw materials. It is also clear that slavery, semi-slavery, peonage, wage serfdom and indentured labour are connected with the large-scale production of goods Industrialization has, no doubt, its good features, too. But as religion has been indicted for its harmfulness, it is necessary to expose the darker side of what science has enabled man to do. Science has made capitalistic industrialization possible, and such industrialization has reduced large masses of men to the position of parts of machinery, has given rise to class war and promoted jealousy, rivalry and hatred among nations bent on capturing markets everywhere.

It is not possible to give a mathematical and quantitative statement showing the destructive and degrading effects

of the misuse of religion and of science respectively. But probably science has been misused to kill, disable, dehumanize or degrade at least as many human beings as religion, if not more

I do not hold any brief against science. I am rather for its proper use What I have written above is simply in support of my position that, as science has not been given the go-by because of its blunders and abuses, so religion ought not to be rejected because of the errors and sinister and degrading beliefs, teachings and practices wrongly connected with it.

Just as many persons profess the greatest belief in science—some of them not knowing what exactly science stands for, so there are others in these days in our country who say that patriotism, nationalism or nationalistic politics —not any prevailing religious faith—should be our religion. I admit the value and usefulness of nationalism at certain stages of the evolution of a people But I cannot be blind to its harmfulness at other stages Great crimes have been committed in various countries in the name of patriotism or nationalism. Tyrants, political leaders, demagogues, parties in power (including the Bolsheviks at present in power in Russia) are to be found among those who have professed to be impelled by patriotism or adherence to some political shibboleth while doing wicked things. It was the observation of some such things which must have led Dr Samuel Johnson to characterize patriotism as the last refuge of scoundrels. "The dictatorship of the proletariat" is the latest cry But would those who would be dictated to under such a regime feel their subjection the less, would the freedom of man be less violated, because the dictators, the despots, the violators were the proletariat? Neither patriotism, nor nationalism, nor communism, nor Bolshevism, nor any other 'ism' can be safely followed as a cult, unless it is instinct with the highest ethical principles, which are of the very essence of religion Love of one's own country is a

highly laudable and valuable sentiment; but the elevation of the Motherland to the position of the Deity in pursuance of the cry, "My country—right or wrong", cannot be a substitute for the eternal verities of religion.

Religion has suffered much on account of its connection with tyrannical and imperialistic forms of government and with capitalism, and generally on account of the dependence of many religious men and women and religious orders on potentates and rich men, whom they could not therefore judge, criticise or rebuke freely and impartially. I need not give many examples. A few will suffice. Thanksgiving services in churches after victory in bloody and predatory warfare, keeping and displaying bloodstained battle-flags in churches, and other similar practices cannot increase one's respect for religion. The relationship which existed in Russia between the oppressive Czarist regime and the orthodox church in that country is certainly responsible to a great extent for the anti-religion and anti-God attitude of the Bolsheviks. Slavery was supported by the Christian clergy, partly because they in their turn depended on the royalty and the aristocracy and the plutocracy whose income was derived directly or indirectly from the exploitation of slave labour.

In considering the mystery of pain and evil, one has to remember that this is a world in course of evolution. The same process of cooling which has made the earth habitable with all its wealth and variety of inorganic matter and of vegetable and animal life, and of a progressive human civilization, may sometimes bring on earthquakes and volcanic eruptions. The latter go with the former. We do not know whether the former would have been possible without the latter. But the Power immanent in and transcending the universe appears to have ordained a process which makes both possible, earthquakes and the like being a diminishing contingency. It is not easy, if at all possible, for us (not at least in our present state of knowledge) to suggest a better cosmic process. As things stand, we have

to take certain constant advantages of the process with its occasional possible but diminishing disadvantages.

The same meteorological laws which have made agriculture, navigation and some other arts possible, occasionally bring on storms and floods. The observations made above with reference to earthquakes, etc., apply here also.

I do not know whether God could or should have made a perfect world complete in every respect. Into that high region of probably futile and fruitless speculation I shall not seek to soar. But this much at least is clear to me that, if we had been placed in a completed and perfected world, we should have lost the inestimable intellectual and moral advantages of struggling with, knowing and adapting to our needs the cosmic forces which mould the universe and keep it going. With the gradually increasing intellectual powers possessed, but not created, by man, he is being able to cope with natural catastrophes and cataclysms in slowly increasing measure.

With regard to things human also, it has to be borne in mind that when man first made his appearance in this world, he did not find himself as a being with perfectly trained hands, legs, eyes and ears, with perfect implements, utensils, instruments and weapons, with houses and furniture and clothing and articles of food ready-made for his use, with a perfect intellect and a fully developed moral and spiritual nature, and with domestic, social, civic and political institutions of every kind and grade with their rules, conventions, regulations and laws. Man was born a very imperfect creature in a very crude environment. With what powers he found himself endowed with, he had to increase them and also to make all the material and immaterial things he required. It was as if God had said to men, "You find yourselves and your surroundings in the condition in which you and they are. I have given you limbs and organs, brain and mind, aspirations and hope, and strength to fight and bear the buffets of elemental forces. Now be My fellow-

workers and make the world gradually a better place to dwell in, and raise yourselves, too, to greater intellectual, moral and spiritual heights in the process."

If perfect men had been placed in a perfect world as members of a perfect society, perhaps they would have been more comfortable animals—though I do not know. Neither do I know why imperfect men were and are born in an unfinished world and society. But this I dimly perceive that, by what appears to us to be making men fellow workers with God or Nature or whatever other name may be used, they have been made the possessors of a high privilege. They have become creators, as it were, in a subsidiary capacity. Without seeking to minimise the importance and beauty of wild varieties of flora and fauna, one may appreciate the uses and beauty of the flowers and fruits of gardens and orchards, including new mixed fruits and flowers made by Luther Burbank and others, and of well-kept pure and cross-bred domesticated animals, which are all partly the handiwork of man. In human society, by using God's gifts, men have created domestic, civic, social, political and other policies and institutions, as also art, poetry and other literature, science philosophy and ideals in general. By their own research they have discovered scientific truths, invented instruments and found out remedies for diseases. Thus are men overcoming difficulties, in which act true manhood consists, and pushing the world, however slowly, nearer and nearer towards the ideal. The striving is worth much, if not as much as the attainment.

Some kinds of bodily pain are signals of danger. It may, however, be beyond the power of man to find out the why or the whence of the existence of all kinds of pain and evil, but man has been doing his best to solve the problem of pain and evil in another way, namely by trying to stamp out their causes. Coping with epidemics has in a great part of the earth become an international endeavour. Research for the cure of diseases considered incurable has been going

on. The bounds of social, civic and political freedom are being made wider. The subjection of women is being gradually ended. The slave-trade no longer exists in any civilized country. Forms of slavery or semi-slavery in the colonial possessions of European powers have drawn the attention of international societies, like the League of Nations, and efforts are being made to put an end to them. Efforts are also being made to put an end to forced labour. The decoying and buying and selling of girls and women for vicious purposes are being thoroughly investigated in a good many countries with a view to suppressing the vicious traffic. Laws have been and are being made for the suppression of brothels. By many scholars at any rate, a sincere and strenuous international effort is being made to outlaw and stamp out war, which, in spite of its glorification in prose and verse, is an epitome of all crimes and vices. In some cases arbitration has already succeeded in preventing war. Prohibition has been carried out in some countries.

I can neither admit nor deny the existence of any unnecessary evil, because I do not know.

I am aware I have not been able to meet any objection to *ahimsa* or *titiksa* thoroughly, nor do I hope to meet thoroughly the one I am now going to state. It may be asked, if God is good, omniscient and omnipotent, why did he create or allow to exist man's evil propensities or passions? I confess my inability to give a satisfactory answer. But I may be permitted to put out some feelers towards it. Generally speaking human propensities, instincts and passions have their legitimate or good uses. In man's struggle for existence, he has to acquire things. Acquisitiveness may degenerate into greed, avarice, cupidity, a thievish or a robbing propensity. But it is not bad in itself. In order that man may live, he has to assert himself. Assertiveness is not in itself bad as by it he is able to live and contribute to society his quota of material and immaterial wealth. If self-assertion degenerates into haughtiness, over beneficence,

the humiliation or suppression of others, into tyranny, it becomes an abuse of a necessary instinct. In order that what is painful, harmful or evil, may be destroyed or combated, the feeling of repulsion, anger, righteous indignation, hatred has to be brought into play. But sheer cruelty or malice is bad. Friendly emulation or rivalry is legitimate, but jealousy, envy and malice, which are cognate feelings, must be deprecated. The sexual impulse is necessary, not only for the preservation and propagation of species, but also for the birth of many forms of pure love besides conjugal love, such, for example, as filial affection and the affection between brothers and sisters, and for the transmission of the intellectual, moral and spiritual qualities of the parents and other ancestors. But is mere animal lust it must be kept in check. It is a matter of experience with *Sādhaks* and *Siddhas* that conjugal love and other forms of domestic affection symbolize human relationships with God. This is one of the reasons why marriage is considered a sacrament and is felt to be necessary for the actual personal realization of the relationships of the human soul with the Oversoul.

In whatever way man may have originated in this earth, he is not self-created, nor are his instincts, powers, and feelings entirely created by himself. There is some Power other than human to which he is indebted for them. If he (man) regards evil as evil, and pain and sorrow and misery as undesirable, and if he is impelled to alleviate, lessen or destroy them, does it not stand to reason that that Power other than himself also wants their elimination and makes for righteousness and joy?

Not to speak of philosophical arguments, plain common sense may suffice to show that the theory of evolution is not anti theistic. When Evolution had not been heard of, and creation, as it is popularly understood, held the field, nobody thought that a description of the growth of man from the embryo in the mother's womb to full develop-

ment after birth was anti-theistic. If such a description of the individual is not anti-theistic, anything similar to it cannot be so when applied to race, species, etc. Of course, my analogy is not correct in all details. It is only meant to convey some idea of my line of thought. Those who want to study the bearing of Evolution on Theism have generally to study authors like Le Conte, Fiske and others.

The old atheism is gone with the old materialism. No scientist can say definitely what matter is or what energy is or what ether is. "Among leading scientists today I think about half assert that the ether exists and the other half deny its existence," says Professor Eddington. Again: "We all share the strange delusion that a lump of matter is something whose general nature is easily comprehensible, whereas the nature of the human spirit is unfathomable. But consider how our supposed acquaintance with the lump of matter is attained. Some influence emanating from it plays on the extremity of a nerve starting a series of physical and chemical changes which are propagated along the nerve to a brain cell; there a mystery happens, and an image or sensation rises in the mind which cannot purport to resemble the stimulus which excites it." The author then observes that "clearly there is one kind of knowledge which cannot pass through such channels, namely, knowledge of the intrinsic nature of that (the lump of matter) which lies at the far end of the line of communication." "Mind is the first and most direct thing in our experience; all else is remote inference." No wonder then that, as the Professor says, "Materialism in its literal sense is long since dead." No doubt, we are told that its place has been taken by other philosophies which represent a virtually equivalent outlook. "The tendency today is not to reduce everything to manifestations of matter—since matter now has only a minor place in the physical world—but to reduce it to manifestations of the operation of natural law." Natural laws "are laws which, unlike human laws, are never

broken." "The essential difference, which we meet on entering the realm of spirit and mind, seems to hang round the word 'Ought.'" "Thus in the physical world what a body does and what a body ought to do are equivalent; but we are aware of another dominion where they are anything but equivalent. We cannot get away from this distinction. Even if morality and religion are dismissed as illusion, the word 'Ought' still has sway." Professor Eddington concludes by saying, "Dismiss the idea that natural law may swallow up religion; it cannot even tackle the multiplication table single-handed." Religion belongs to "the realm of spirit and mind," "a domain of the other type of law—laws which ought to be kept, but may be broken."

From the fact that man's conception of God has been improving and new truths about Him are being discovered and realised, some have gone the length of saying that man is creating God. We must suppose, then, that the discovery of new continents and new countries and planets and stars was not discovery but creation.

The attitude of the *āstika* towards agnosticism is clearly indicated by the Upanishadic text:

नाहं मन्ये सुवेदेति नो न वेदेति वेद च ।
यो नस्तद्वेद तद्वेद नो न वेदेति वेद च ॥

"I do not think I have known *Brahman* well. It is not that I do not know Him, nor is it that I know Him. He among us who knows the meaning of the saying, 'It is not that I do not know Him, nor is it that I know Him,' knows Him."

The spirit of doubt and denial is no new thing. It has existed before and exists now. Let me here consider the words in which this spirit once found utterance more than fifty years ago in England. Standing on Dover Beach at ebb tide, Matthew Arnold gave expression to it thus:

"The Sea of Faith
Was once, too, at the full, and round earth's shore
Lay like the folds of a bright girdle furled
But now I only hear
Its melancholy, long withdrawing roar,
Retreating, to the breath
Of the night-wind, down the vast edges drear
And naked shingles of the world.
Ah, love, Let us be true
To one another! for the world, which seems
To lie before us like a land of dreams,
So various, so beautiful, so new,
Hath really neither joy, nor love, nor light,
Nor certitude, nor peace, nor help for pain,
And we are here as on a darkling plain,
Swept with confused alarms of struggle and flight,
Where ignorant armies clash by night."

This may be good poetry, but it is certainly not a convincing philosophy of life for the individual and the race

The poet tells his beloved, "Let us be true to one another" He is not the only person who loved some one, whose love he sought to have and had and to whom he wanted to be true and who also was expected to be true to him. Such desire to love and be loved and to be true to one another and the hope of reciprocal love and fidelity are common to all the race. And love and fidelity and hope are undying. Whence come all these immortal things? They are not of men's making. Yet these are the best things in men and their brothers and sisters, the essence of all religion, and "truly reflect the nature of reality." Where there are love and fidelity and hope, and variety, beauty and newness, there is undoubtedly joy, light, certitude, peace and help for pain And these have their origin and abode in Him who is both immanent in us and the world and also transcendent.

The menace to theism has come in comparatively

modern times from a belief in the sufficiency of ethics for all the needs of man and from the non-theistic variety of humanism.

It is admitted that there have been and are forms of faith of which high moral principles are not an essential element, or in which they hold but a subordinate place, or from which they are even absent. Some forms of faith there are in which the ethics are ethics of fear of consequences, or in which the ethics are ethics of the commercial motive:—if you be not virtuous, God will be angry with you, you will be punished you will be sent to hell: if you are virtuous, if you praise God He will be pleased with you, you will be rewarded and will be sent to heaven But there are religions—true Buddhism and the religion of the classic Upanishads, for example—of which the highest ethics form essential elements. The faith of the Brahmo Samaj also belongs to this class of religions. Their ethics spring out of their very idea of God Because He is true, loving, good, pure, , therefore, man is to be like Him, though at an immeasurable distance, as in some mysterious way man is akin to Him, related to Him, part of Him, as it were. Weak, imperfect, and often impure, as man is, he may shrink from this awe inspiring thought. But a truth it is. Instead of the ethics of fear and of the commercial motive, men should cultivate the ethics of the love of God and of the beauty of holiness.

It is admitted that there have been non-believers in God and agnostics and sceptics who have had moral lives and have been servants and benefactors of man. But the greatest fighters and sufferers for truth, justice and humanity and the largest numbers of them have been religious men. If those who had been similar fighters and sufferers without believing in God or in any religion had asked themselves earnestly why they believed in ultimate victory in their fight and if light had been vouchsafed unto them, it would have been the light of *astikya* or of belief in some eternal

verity

In the sorest of trials and perplexities, when the battle rages most furiously, mere ethics cannot suffice for our need, there must be reliance on the Supreme Spirit. There is need of His inspiration. For the highest, greatest, purest and most beautiful flowering and fruitage of human life, the dynamic of faith in the Supreme Spirit is necessary. Spirituality is higher than a merely ethical life.

Of humanism there are different varieties. One may be simply the outcome of rebellion against certain rejected notions of God, formerly prevalent but no longer tenable. Such humanism does not conflict with my *dharma*, for I am not bound by any creeds which are inconsistent with reason and the highest spiritual experience yet acquired. There are other humanists who are such owing to uncertainty about God's relationship to the totality of reality. Such humanism is not wholly incompatible with the reverent agnosticism, mingled with God-consciousness, to be found in the Upanishadic verse quoted before. There is a third kind of humanism which asserts —

"There is nothing in the world save what we know as nature. Personality and all that pertains thereto are but refined expressions of physical and chemical forces. Not only is there no evidence of cosmic forces to which these aspects of personality may be related, but there is no need for such assumption. God is not necessary. There is no fact in reality, either human or super-human, either natural or super-natural, that corresponds to the idea of God. God cannot be proved, is not needed, and does more harm than good. The very idea of God is an unnatural and impossible conception. There is no God."

With this class of humanists I disagree. As partly indicated above, certain natural laws—chemistry, physics, biology, etc.,—cannot explain the world and mind and spirit. They cannot explain 'self' and personality. Some Power and Will and Essence—some Supreme Personality—

it is necessary to believe in, in order fully to understand and explain the heights and depths and essence of human personality. There is a reality closely related to our life which necessitates and justifies a belief in *Brahman*. With faith in this Reality, man can better understand existence, can better understand the world, its history and its intricate systems of law and orderliness, its process and tendencies with an underlying unity and harmony. Einstein, who claims to be "a devoutly religious man," writes in the *New York Times*. "The basis of all scientific work is the conviction that the world is an ordered and comprehensible entity, which is a religious sentiment. My religious feeling is a humble amazement at the order revealed in the small patch of reality to which our feeble intelligence is equal."

Speaking of personality, the fact that one human being may hold converse with another, may derive comfort, solace, strength and counsel from him, may unburden himself to him, does not obviate the necessity of a Supreme Person with whom we may all hold converse. There may be difference of opinion regarding prayer for definite gifts or boons or help, but of the value and need of prayer as communion and of unburdening one's soul for some response, there can be no question so far as *Astikas* are concerned. For a very humble person, unadvanced in the realm of spirituality, it would be audacious to speak of any spiritual experience. But I may be permitted to bear witness to one fact with great diffidence and humility. There are things which cannot be communicated to any human being, perplexities whose tangled skein no human hand can unravel, trials in which no human help can be sought or obtained. On such occasions, unburdening oneself to the Refuge of all who are heavy-laden, has been found to be a relief, response has been believed to be obtained, healing and strength and calm have been available. A great poet and *sadhaka*, on being asked, reassured the questioner that such response was a reality, not an illusion.

Personality, with consciousness, thought, will, and the sense of oughtness implied therein, cannot spring from anything less than, anything inferior to, Personality. It is as possible for a machine-like soulless universe to create man endowed with mind and spirit, as it would be for a clock to create the clock-maker. If the Power in nature and in us and beyond us and nature be not personal in the human sense, it must be Super-personal, not infra-personal or sub-personal.

RAMANANDA CHATTERJEE

विवितरत्नसङ्ग्रहः ।

स्वर्गिलाभुद्धिरिवाय कल्पुर्वशतमोहिते ।
जगद्गानन्दकन्दाय नमः परमतेजसे ॥
आचार्यचरणकमले विमले सत्वार्थं शिरसि धारयतीव ।
विवितरत्नसङ्ग्रहाऽयं विवृत्यते सुजनबोधार्थम् ॥

अस्ति सावदातिकपक्षानुवर्तिनामस्तिलानामपि तीर्थकराणां मानसि— यद्यच्छुचिपवनसंयोगपरस्परसंघर्षोद्भूतसंवेगवशाद्विहितविधिक्रियाजन्यं सत्यं किञ्चित् । (१) तच्चाऽस्माभिरेकस्वभावस्थिरान्यं धर्माधर्मसंज्ञाभिधेयम् । आत्मानोऽपि लिङ्गीकादिविधायकस्वगमनमिच्छाहेतुपदघटितवाक्यैरेव साक्षात्कलितपाणयो, इतरैस्तु परम्परया । स्मृतस्तु मन्वादिभणितः आत्मानमवरुणिमेनानुरूपात्तत्तदनोधिसाधेन धर्माधर्मौ संसृजेत्, विशदतया चित्तवार्थमनुवदन्ति सात्वतः, न मात्रयाऽपि तत्र (२) स्वातन्त्र्यमवलम्बन्ते । एवं कुतस्त्यानि चेति । यदपि नाम कश्चन कौचिन्तीर्थकृद्भिरुक्तं 'शुक्लोऽपि शाक्यकुलधर्मात्मा', ते हि चतुर्वेद स्वतन्त्रविशेषाहितसंस्कारसचिवेन धर्माधर्मावनुरुध्य तौ स्वजन्येषु स्वयमन्यानिति तदपि तद्वीणामस्मदपूर्वजानां प्रासादस्थविषादपरोक्षाऽऽस्थेयम् । न अतीन्द्रियं वस्तु यस्य कस्याऽऽसन्निधिविषयतामनुभवितुमलमिति एव व्यवस्थापयन्ति प्रमाणपरिशीलनपटवो मीमांसकाः । उक्तं हि भगवता महर्षिजैमिनिना 'चोदना लक्षणोऽर्थो धर्मः' इति ।

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(१) विमलस्तं पवनवत् न कलोऽस्तिवेव विना ।
तेनमो निर्विकेशाय न मूर्तेस्तद्गुणैरपि ॥
तस्मात्तस्तिरिवाय नमिष्ये ॥ (कुवु० स्त० १ का० २० पृ० ३०० मी०)

(२) 'स्वातन्त्र्येण स्मृतीनामाद्यात्मा न मानमनमनुयुक्तमात् ।
मन्वादीनामतीन्द्रियार्थदर्शने प्रमाणाभावात्' दिग्दर्शनमात्रमेतदिति ॥
(कुवु० स्त० २. पृ० २०)

सूत्रमिदं विपरीतया मात्यकारेण शबरस्वामिना "चोदना हि भूतं भवन्तं भविष्यन्तं सूक्ष्मं व्यवहितं विप्रकृष्टमित्येवमादि शक्नोत्यवगमयितुम्। नाऽऽन्यत्किञ्चनेन्द्रियमिति" "अशक्यं हि तत्पुरुषेण ज्ञातुमुते वचनात्" (शा० भा० सू० १ वे ११,२३ मीमांसा-स०) इति च चोदनैकसमधिगम्यता धर्मस्योक्ता।

कल्पान्तरेऽपि, प्रमाणैरस्य कस्यचिदार्थदर्शनम्।
यदिदानीं लोकस्य तथा कालान्तरेऽप्यभूत्॥
तत्राऽप्यतिशयो दृष्टः स स्वार्थातिलङ्घनात्।
दूरसूक्ष्मादिदृष्टौ स्यात् रूपे श्रोत्रवृत्तिता॥

इत्यादिना वार्तिककृताऽपि सुष्ठूपपादितम्—

(श्लो० वा० सू० २ श्लो० ११३-११४)

अतीन्द्रियवस्तुग्रहणे न कल्पान्तरेन्द्रियसामर्थ्यमिति। एवञ्च वाहसाधर्म्यलौकिकार्थप्रतिपादनेऽनिष्टरसापेक्षया विस्तरनागरोत्तरऽम्नायागमादिपदाभिधेयानामपि सामर्थ्यम्। तदेव चाऽऽपूर्वादिष्टाभिलाषाऽपरपर्यायं धर्मस्वभावमिति वस्तुबलायातमनिन्द्रियान्तं विपश्चितः।

एवञ्चाऽऽलौकिकश्चेत्सत्यत्वानिष्टसाधनत्वं चाशिष्टो धर्माधर्मपदवाच्यो वस्तुनोर्वैकल्पनाधिगम्यत्वमभ्युपगच्छन्तोऽपि दार्शनिका तत्स्वरूपे परे विवदमाना दृश्यन्ते। तत्र बाह्यैः (१) शाक्याः ज्ञानस्य ज्ञानान्तरवेद्यत्वं वासनां धर्मत्वमिच्छन्ति।(२) आर्हताः शरीरस्याकान्तुद्गतस्यात् परमाणुविशेषान्। आत्मिकेषु—वार्हिका (३) आत्मनित्यं गुणविशेषम्। (४) सांख्याश्चु अन्तःकरणस्य वृत्तिविशेषम्। (५) भाट्टाः तु (६) तत्तद्व्यक्तैस्तत्तत्कर्मसाधनत्वेन विहितानां यागदानहोमादीनामेव कर्मणां धर्मत्वमभ्युपगच्छन्ति, निषिद्धानाञ्च कलञ्जभक्षणादीनामधर्मत्वम्।(७) प्राभाकराः पुनः तत्तद्विधिवाक्यबाध्य तत्तद्यागवापादिक्रियाजन्यमपूर्वपदाभिधेयं प्रयोजनरागोत्तर नियोगोऽपि धर्म इत्यन्ते। इदमेषां वैमत्यं धर्मस्वरूपविनिश्चये। अस्तु यथा तथा वा। न वेदविहितानां

(१) तत्त्वार्थ सा. १.१ २-श्लोक. ११२
(२) पाञ्चाल आर्य-देवादि पञ्चमेन पञ्चमेन विभिन्नतया जुगुप्त च। स्थिर शुद्ध पर्यन्तमुत्पन्नं कलुषित दुःखमविवाई॥ (षट् स दिग्वो दृ २५६.११)
(३) धर्म-पुण्यपुञ्ज। तत्त्वार्थाधिगमाभ्य सू० ५४१ अधर्मोऽधर्मगुण सू० ३८०।
(४) धर्मो धर्मवर्मेव धर्मादीनाम् (भा सू. अ ५.सू २५.)
(५) शब्दो हि दुःखप्रतिः स्व दुःखगुणकर्मणि। चोदनालक्षणेनैवाज्ञा तस्मात्तेनैव धर्मता॥ (श्लो० वा० सू० २ श्लोक० १६१) इति वार्तिककारः॥

तदौचित्यानौचित्यविचारे प्रवर्तते। परन्तु भाष्यकार एतदनुसृत्य निर्णय-स्वरूपं तत्रैव च लिङ्गभिन्नवर्णं तत्र च शक्तिग्रहोपाय तत्प्रयुक्तमाचरकतात्र यथानिर्दिष्टा मतान्तरोपपादनपूर्वकं यथामति निरूपयामः ॥

(वैयाकरणमतम्)

तत्र वैयाकरणमतात् 'विधिनिमन्त्रणामन्त्रणाधीष्टसंप्रश्नप्रार्थनेषु लिङ्' इति पाणिनिसूत्रादिष्वेषु सदृशवर्णेषु लिङ् प्रवर्तते। तत्र विधिरादौ निरूपणं भूत्वाद् यथाशक्तिकार्यविशेषे प्रवर्तन(१)माज्ञापरपर्यायम्। निमन्त्रणं भोजनकरणे प्रत्यवायपरिहारप्रवर्तनीच्छा भोजनादौ। आमन्त्रणं कामचाराभ्यनुज्ञा यथेष्टं प्रवर्तस्वेत्यादिका। अधीष्टं पुत्रादिस्तत्कारपुरुषस्य व्यापारः अध्यर्थ-लाभः फलाय प्रति प्रेरणरूपः। आशीः फलाद्याशीर्वचनम्। तत्र विध्यादीनां चतुर्णां पुरुषगुणादीनेऽपि कालेषु चतुर्थ्यर्थे अन्तर्भावः प्रवृत्तिजननानुकूलव्यापाररूपतया प्रवर्तनात्मकत्वं तत्रापि प्रवर्तनाविशेषे रूपेण लिङ्लकारस्यापि तत्प्रयुक्तरूपेणैव शक्तिः। उक्तं हि हरिणा—

अस्ति प्रवर्तनारूपमनुस्यूतं चतुर्ष्वपि।
तत्रैव लिङ्विधातव्यः किं भेदस्य विवक्षया॥
न्यायप्रयोजनार्थं वा प्रत्यक्षार्थकमथापि वा।
विध्यादीनामुपादानं चतुर्णामाहितः कृतम्॥ इति

(वैयाकरणभूषणसार पृ० १४५ चौ सं)

स च प्रवर्तनारूपो व्यापार इष्टसाधनत्वरूप एव। लोके हि सर्वोऽपि पुरुषः यथा क्रियमाणमेतन्मत्तोऽस्मिन् स्वयमिष्यतीति प्रयतमानः प्रतिपद्यते। तत्र इच्छति—इदमहं कुर्यामिति। तत्रैव करोतीति सर्वजनीनम्। एवञ्च अनधि-गतशक्तिको व्युत्पित्सुर्बालः व्यवहारकाले लिङ्श्रवणानन्तरभाविनीं पुरुषप्रवृत्तिं दृष्ट्वा तत्र स्वप्रवृत्तिहेतोस्तेन प्रयुक्तसाधनत्वज्ञानपूर्वकतामनुमिनोति—अस्य पुरुषस्याऽस्मिन्कर्मणि प्रवृत्तिः इष्टसाधनत्वज्ञानजन्यिका, प्रवृत्तित्वात्, मदीय-प्रवृत्तिवत्, इति। एवं इष्टसाधनत्वज्ञानेऽनुमिते तज्ज्ञानकारणजिज्ञासायां लिङ्व्य-तिरेकानन्वयाभ्यामनन्तरमेवाविलम्बेन तज्ज्ञानकारणत्वं निश्चिनोति। ततः

(१) वा वेत्यादिष्वाज्ञानुमतिज्ञानकारणत्वाभावादुक्तिमिति सः भाष्ये। वा वेति पूजा-सम्भावनाविकल्पेषु सः भाष्येषु। वाक्यालाकरणिका भवुका। सन्निधानादयो-जया सम्भावनः। आशीरुक्ता आशीर्वा। सुखमाशीर्वाद इति (कुमु० ख० ४ पृ० १३२)

आत्मनेपदाभ्यां लिङ्गन्यस्त्वमवधारयति । ततश्च लिङादिशब्दस्यैव तस्य बोधकत्वात् 'यत्र समानप्रतीतौ वक्तव्य व्यापार' इति भाष्यादिव्याख्या-त्सेनेष्टसाधनत्वस्य, प्रवर्तकत्वाच्च तस्य प्रवर्तनारूपत्वमित्यवधारयति । अतएव-ष्टसाधनत्वमेव प्रवर्तनात्वेन रूपेण लिङर्थः । इदमेव च विधित्वमस्मदभि-मतस्याऽस्याभिमतम् । अत उक्तं विधिविवेके—

'पुंसां नेष्टाभ्युपायत्वात् क्रियास्वन्यः प्रवर्तकः ।
प्रवृत्तिहेतुं धर्मं च प्रवदन्ति प्रवर्तनाम् ॥' इति ॥

(नैयायिकमतम्)

नैयायिकेषु प्राचीननवीनभेदेनाऽस्ति विप्रतिपत्तिर्लिङर्थे । तत्र प्राचीना नैयायिकाः बलवदनिष्टाननुबन्धीष्टसाधनत्व कृतिसाध्यत्वञ्च त्रयमपि लिङ्-गतं लिङर्थ इत्यभ्युपगच्छन्ति । तेषामयमाशयः—सर्वत्र प्रवृत्तौ पूर्वोक्तं त्रितयमप्यपेक्ष्यते । अन्यथा इष्टसाधनत्वबलवदनिष्टाननुबन्धित्वज्ञानसत्त्वेऽपि कृतिसाध्यत्वज्ञानाभावे चन्द्रमण्डलाहरणादौ प्रवृत्त्यभावदर्शनात् । विषसंपृक्तान्नभोजने तृप्तिरूपेष्टसाधनत्वज्ञानसत्त्वेऽपि स्वकृतिसाध्यत्वज्ञानसत्त्वेऽपि च मरणरूपबलवदनिष्टजनकत्वज्ञानाभावेन तत्र पुरुषाणां प्रवृत्त्यनुदयावगमात् । एवं निष्फलोक्ते मरणानीरस्यादिव्यापारे बलवदनिष्टाजनकत्वकृतिसाध्यत्वयोर्ज्ञानेऽपि इष्टसाधनत्वज्ञानाभावेन तत्राऽपि प्रेक्षावतामप्रवृत्तिरिति बोध्यम् । अतो यत्र प्रवृत्तिर्हेतौ पुंसः कार्ये क्रियायामपि शब्देन पुरुषः प्रवर्तत इत्यङ्गीकार्यम् । प्रवृत्तिश्च द्वेधा भवति—स्वतन्त्रा परतन्त्रा चेति । तत्र स्वतन्त्रप्रवृत्तिस्थले पूर्वोक्तं प्रत्यक्षाद्यन्यतमेनेष्टसाधनत्वादिकं स्वत एव बुद्ध्वा प्रवर्तते इति स्वानुभवसंवेद्यम् । पराधीनप्रवृत्तौ तु परकीयं लिङादिघटितं वाक्यं श्रुत्वा । तत्र तस्या अपि प्रवृत्तेरिष्टाद्यभिप्रायविशिष्टसाधनत्वज्ञानपूर्वकत्वं तथापि तावत् । तत्र कथमिष्टसाधनत्वज्ञानमिति ज्ञानकारणजिज्ञासायां लिङादिवाक्यश्रवणानन्तरभावित्वात्तस्य तदाप्तवक्त्रभिप्रायं लिङ्गत्वमवधारयति ।

तत्राऽस्मत्पक्षोपाध्यायः लिङादिज्ञानमनपेक्ष्यमभावार्थं येन लिङादिवाक्यस्य निर्विवादे वृद्धिः प्रवृत्तिः । अतश्च बलवदनिष्टाजनकत्वादि त्रितयमपि लिङर्थ इति सिध्यतीति । न्यायमतेऽनु प्राचीनानां नवीनानाञ्च समानम् । तत्र त्रितयस्यापि पृथक्पृथक्शक्तिः सर्वत्रैव त्रितयानुगतेति सत्यत्वे पृथक्शक्तिकल्पनायां एकस्य

लिङः अनेकप्रानेकशक्तिकल्पनाप्रसङ्गात्तस्यापि वैलक्षण्यनिष्ठानुपपत्तिरेवेत्यावनन्तर्यविशिष्टं कृतिसाध्यत्वे एवैव शक्तिरिति[2] प्राचीनाः ।

नवीनास्तु यजेतेत्यनिष्टाजनकत्वादीनां प्रयोगाभेदीकरणे कस्य विशेषणत्वं कस्य वा विशेष्यत्वमविवक्षितम् विनिगमकाभावात् विशेष्यत्वेषु तुल्यैव शक्तिः । एवमन्यत्रापि तत्रैवेति पुष्पवच्छब्दस्य यथा मकरन्दस्तथापि सुगन्धस्य चन्द्रसूर्यरूपानेकार्थबोधकत्वं, तद्वत्तस्यैव लुप्तस्य लिङः अर्थत्रयबोधकता । प्रयोगाभेदार्थेन बाधकाभावे भासार्थं एवान्वयः । बाधकस्तु अन्यथाऽन्वयस्य, यथा 'श्येनेनाभिचरन्यजेत' इत्यत्र । तत्र हि यजेतेत्यनिष्टाजनकत्वं श्येने बाधितम् । वैरिवारणरूपतात्कालिकेष्टसाधनत्वेऽपि कालान्तरभाविनरकसाधनत्वस्य शास्त्रेण बोधितत्वादिति बवन्ति ।

रजोगोपकारास्तु आख्यातार्थकृतिगतत्वेनैवेष्टसाधनत्वं मनुष्यहितुरिति कृत्वा तद्गतत्वमेव तस्य लिङर्थत्वं प्रवर्तकत्वस्य तत्रैवाभिप्रेतत्वात् । ननु सर्वेऽपि 'लिङर्थज्ञानजन्यं ज्ञानं प्रवर्तकम्' इति तन्त्रचिन्तामणिकृदुक्तिमवलम्ब्य इदं स्वमाशयं व्याख्यायुरवधिति मन्यामहे ।

नैयायिकशिरोमणयस्तु नैयायिकाश्चैत्सर्वेऽपि पक्षं परित्यज्य फलत्वेन प्रवर्तकत्वमङ्गीकृत्य 'यत्रार्थमधिकृत्य पुरुषः प्रवर्तते तत्प्रयोजनम्' इति गौतमसूत्रे (अ० १ आ० १ सू० २४) प्रयोजनस्य (१) ।

तदयमाशयः—

'विधिर्वेदप्रसिद्धाः प्रकृत्यादौ लिङादिभिः ।
अभिधेयाऽनुबन्धा तु कर्तृत्वाद्यनुबन्धता ॥

(न्या० कु० ख० ५ का० ३५ पृ० ११६)

इति वदन्तो वस्तुतिरिच्छामेव लिङर्थं प्रवर्तिकामभिमन्यन्ते ॥

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(१) तत्रलिङं सर्वत्रैव (पृ० ३०१) कुत्रचित्तु पुरुषविशेषणे, 'यत्र आत्मैवाभिधा, कृत्यादिभेदात्तदितरत्' ।

(२) तत्रवस्तुत एकत्वे न विधिर्वाऽपि शब्दो लिङादि
प्रकारादिप्रभेदेनैव न हि बहुरभिधा यत्रवाक्यादयोऽपि ।
न अभेदस्तावतैव विधिविषयतां यान्ति रागादिवेव
तेनाऽऽकारकल्पनान्तं यदभयमतिः तेरके सूत्रकारः' ॥

(न्या० म० पृ० ३६२)

(वेदान्तिनां मतम्)

वेदान्तिनस्तु सिद्धेऽपि वस्तुनि वेदान्तवाक्यानां प्रामाण्यमुपपादयितव्यतासिद्धये च सर्वप्रहाणां कार्यान्वयं निषेधन्त अन्यथाल्लिङादीनामपि कार्यार्थता इति मेधस्तिः। तथाऽऽचार्यशङ्करभगवत्पादैरुक्तम् 'अज्ञातबुद्धिरौदासीन्यकारणम्' इति भाष्यग्रन्थोपपादनावसरे आचार्यैरुक्तत्वात्। 'प्रवर्तकवाक्येषु यजेतेत्यादिषु शब्दएव कर्तव्यलिप्सासाधनव्यापारमवगमयन् तस्येष्टसाधनतां कर्तव्यतामवगमयति, अनन्यलभ्यत्वात्तु मन्वः। अन्यथा लभ्यस्य च शब्दार्थत्वादिना यज्ञेनेष्टसाधनत्वं कर्तव्यत्वं च कृतिसाध्यतापरपर्यायं लिङर्थः, इत्युक्तवादिनां मतात्। (पृ० १६७ N. B. ed.)

प्रेरकत्वरूपाणां तु निमोगस्य लिङर्थत्वे बलवद्बाधकाभावे स्वरूपतः प्रेरकत्वोक्तिरपि व्यापारान्तरार्था लिङ्वाच्यत्वं निरवयवस्य साधनत्वस्यैव लिङर्थत्वमभ्युपगच्छन्ति बृहदारण्यकवार्तिके—

लिङादिः प्रेरणावाची कृतः कार्यैर्गतर्थत्वात्।
क्रियाप्रत्येन साध्यत्वे भावार्थो लिङ्या यतः ॥ १ ॥
प्रेरणायाश्च नैव स्वात्साधनत्वात् पृथक्।
कृत्यन्तकार्यविषयोक्तिरस्तु लिङ्गिनस्यायम् ॥ २ ॥
न स्वरूपं लिङादीनां प्रेरणाद्यात्मकत्वतः।
भावोऽप्यस्वरूपमेवाऽपि प्रेरणानुगमात्तथा ॥ ३ ॥
शाब्दोऽलभिधेयत्वात् तद्व्यापारोऽपि नस्यते।
प्रेरणाभावतो वेह तद्रूपाभावोऽपि नेरणा ॥४॥
अतस्तनीतिलाभार्थत्वा नस्तत्वोऽपि न।
भावुतं प्रेरणा वेदा इत्यतो प्रेरणा यतः ॥ ५ ॥ इति ॥

पूर्वोदाहृतभाट्टवाक्यस्य भाष्यानुसारेण कल्पतरुकारेण विवृतवाक्यैः परिवालनपरैरुक्तत्वात् पक्षा लिङर्थतोपपादिता। ते अनन्तरोदाहरिष्यमाणन्यायरत्नाकरकृतकथनाच्चेदान्तमीमांसितं न ते पृथगत्र निरूप्यन्ते।

संक्षेपशारीरककारस्तु अपि नैतेभ्य पक्षान्तरं चिन्तयन्तः। अतोऽद्वैतवेदान्तिनां मते केषाञ्चिदिष्टसाधनत्वकृतिसाध्यत्वे लिङर्थं केषाञ्चित्कृतिसाध्यत्वमात्रं लिङर्थं इति कल्पितम्।

विशिष्टहेतिनातु लुप्तिस्तूतीनां भगवद्ज्ञानरूपत्वमभिप्रयन्तः तत्सन्निधिवाचकपदकीभूतलिङादिभिरपि भगवतः परमेश्वरस्याऽऽश्रयत्वमेव इति तस्या एव लिङर्थत्वमिच्छन्ति । उक्तं हि चोदनासूत्रे शेबरभाष्यारम्भे श्रीमदाचार्यैः, 'चोदनेति विधिविशेषाभिधायकः शब्दो विष्णुरस्मीत्युच्यते । स हि शब्दब्रह्मरूपतया अनुप्रविष्टिरूपपुरुषस्वाधारतयाऽऽश्रयत्वाद्यधाकारविषयतया चोदनेत्युच्यते' इति । तत्र प्रमाणितमेव श्रीभाष्यवाक्यं 'स्वप्रकाशत्वमेवाधिशास्त्रं च प्रदिश्य' इति । इत्थं च वेदस्यैवरूपत्वमभ्युपगम्य तद्ब्रह्मरूपत्वं विधीनामभ्युपगच्छन्तो लोकवेदसाधारणेन लिङर्थत्वं वक्तुमभिप्रायवन्तः, वेदस्य च सर्वेश्वरनिर्मितत्वमङ्गीकुर्वन्तो नैयायिकशिरोमणीयचतुष्टयमतानुयायिनो नातिदूरे वर्तन्ते ।

(मीमांसकमतम्)

मीमांसकाः भाट्टाभाकरमुरारिमिश्रीयभेदेन त्रिधा भिन्ना अपि, इदानीं मुरारिमिश्रमतस्य तत्कुलयायिनां वाङ्मयोपलम्भात् द्वित्वेव गणिताः । तत्र भाट्टाचार्याणां 'अभिधा भावनामाहुरन्यामेव लिङादयः' इत्यनतिरिक्तपदार्थानां कुमारिलभट्टोक्तिमवलम्ब्य स्वं स्वमाशयमन्यथाऽन्यथा वर्णयितुं प्रवृत्ताः ।

(१) (मण्डनमिश्रमतम्)

तत्र मण्डनमिश्राणां विध्यसाधनत्वज्ञानमेव लोके तत्र तत्र पुरुषाणां प्रवृत्तिहेतुः इयत इति तेनैव लिङर्थेन भवितव्यम् । वेदेऽपि च वैरूप्यपरिहाराय तस्यैव लिङर्थत्वमभ्युपेयमिति लोकवेदसाधारणेनैकेनैव भावनात्मकेन लिङर्थ इति वदन्ति । स्वीयं पक्षमिमं स्थापयन्तः प्रवृत्तेस्तैः केवलं प्रवर्तकत्वेनैव अभिहिता । तथाहि—(१) लिङादिशब्दमात्रं कञ्चिदप्यर्थमनभिधत्वेनशब्दान्वयाद्विना न स्वरूपेण प्रवर्तकम् । (२) प्रेरणाऽभ्येषणादीनामपि न प्रवर्तकत्वम् । लोके हि प्रवर्तकप्रेरणाऽभ्येषणाऽभ्यनुज्ञाप्रवर्तनादीनां निमित्तानां विद्यमानत्वात्पुरुषस्य लिङर्थे । तस्माद्धेतोरेषेषु वाक्यत्वसंभवात्तदुभयसाधारणेन तत्र लिङर्थत्वानुपपत्तेः । (३) अभिधायाः शब्दनिष्ठायाः अर्थबोधनानुकूलायास्तदुक्तायाः अपि न लिङर्थत्वम् । (४) एवं प्रवर्तनाऽपि न विध्यर्थः । तस्या अपि प्रवर्तयितुरर्थत्वेन पुरुषनिष्ठत्वावश्यं भावात् (५) अप्राप्तिज्ञापकत्वं शब्दबोधोऽपि न

(a) इमे प्रकारितपक्षकाः पक्षाः परिशिष्टेऽनुवृत्ताः । (इत्थं १४० चित्रे ज्ञा०)

विधिः। सम्बन्धज्ञानाभावस्य प्रवृत्तिजनकत्वादर्शनात्। इत्येवं पक्षान्तरदूषयित्वाऽनन्तरं प्राभाकराभिमतस्य नियोगस्य लिङर्थत्वं महता परिकरेण समर्थयित्वा पक्षे उपसंहृतम्—'तस्मादिदमपि दर्शनमकिञ्चित्करमानसुन्दरमिति नाद्रियन्ते बुधा' इति। स्वमतत्वेनस्थापित 'प्रवृत्तिसमर्था हि कश्चिदात्माशक्ति-शक्तो व्यापारविधाने प्रवर्तना। सा च क्रियायामपेक्षितोपायतैव' इति। (विधिवि० पृ० २७३)

(२) (पार्थसारथिमिश्रमतम्)

मिश्रास्तु लिङर्थं चतुर्धा व्यवस्थापयन्ति। तत्र प्रथमं प्राभाकराभिमतं नियोगविधित्वं स्वमुपपाद्य तत्स्वरूपयित्वाऽनन्तरं (१) इष्टसाधनत्वमेव तत्त्वेन रूपेण लिङर्थः। (२) तत्तद्गात्वसंरूपक्रियागतं कार्यत्वं लिङर्थः। (३) अभिधारूपो व्यापारः शब्दगतव्यापारः, इति मतत्रयं निरस्य द्वितीयतृतीयमतयोर्वार्तिकानुगुणतां प्रदर्श्य 'न्यायविदां तु' इत्यादिना समीहितसाधनतया एव लिङर्थत्वं (a) व्याभिमतं प्रादर्शयन्नुपसंहारमाहात्म्यम्।

(३) (भट्टसोमेश्वरमतम्)

न्यायसुधाकारात् सोमेश्वरभट्टाः कर्मभावाधिकरणपूर्वपक्षसमाप्तौ—

(१) "प्रवर्तको लिङादिर्वा (२) तत्क्रिया वा विलक्षणा (३) अभिधा वा (४) अथवाऽऽख्यादिः (५) कार्यं वा (६) श्रेयोहेतुता" इति पक्षषट्कं पुरस्कृत्य तत्रैव यद्यपि पक्षान्तराणि दूषयित्वाऽसौ 'का पुनः प्रवर्तना' इति परिचोद्य 'प्रवृत्तिहेतुभूतः प्रवर्तयितृधर्मो कश्चिदिति ब्रूमः' इति समाधायाऽनन्तरं 'प्रवर्तयितृधर्मो मानसमहत्त्वमेव' प्रेषादिरूपं व्यापारं शक्यते। वेदे तु पुरुषाभावेन लिङादेरेव प्रवर्तकत्वाच्छब्दधर्मो भावनेति'

(a) तत्र 'न्यायविदः समीहितसाधनतां विदुर्लिङर्थम्' इत्यस्यार्थं [illegible] 'न्यायविदः, मीमांसकाः समीहितसाधनतां लिङर्थं विदुः' [illegible] मन्यते। [illegible] 'प्राभाकराणां इष्टसाधनतैव प्रवर्तना' इति सुस्पष्टं कथनात्। (शा० दी० (न्यायरत्नमालिका) पृष्ठ ४) [illegible] 'न्यायरत्नाकरकारप्रभृतिभिः [illegible] संवादश्च' इति [illegible] [illegible] सन्दर्भे [illegible]।

मदन्तः पूर्वोक्तेभ्यश्चतुर्भ्योऽपि पञ्चेभ्य आतिरिक्तं तत्तत्र नवर्तनाविधि-यत्वमपि नेत्याचक्रुः। अत्रैव च पञ्चानुगमनन्तरकालिकैरशङ्कितमहाग्रह-देवगमुतिभिरनुसरीहदः। एवं लिङ्गविधिषु परस्परं विवदमाना अपीमे महा-भेदाभिनिवेशेन प्राभाकरमतखण्डनप्रसङ्गं 'अन्यैस्तु विशेषो हु अर्थ पञ्चेत्यपर शतम्' इति न्यायमवाञ्चकारन्। आसाद्यैव विधिका प्राभाकरादि मुहुराग-ग्रहार कृत। अन्यैर्अपि ये पञ्चाशतैरे स्वयिकतास्ते नेत्यात्मविधि तु नेत्र्तया निर्णयं प्रमाणमुपलभ्यते। तथापि नूनं कैश्चिदाहृता एतेषां पञ्चा इति खण्डन-बलादवगम्यते।

(४) (प्राभाकरमतम्)

प्राभाकरास्तु लिङ्गादिषु लौकिकेषु वाक्येषु तत्तत्क्रियाविधिं कार्यत्वाभि-लिङ्गभिधेयम्। स एव च वाक्यार्थः। वेदे च वाक्यस्यातेऽर्थवशादपूर्वा-परभावेनान्वयोऽपरः कल्पयेत्यनाकलायिनो लिङ्गयेत्यम्। तस्यैव च वाक्यार्थ-त्वमिति कथयन्ति। अर्थं हि तेषामाशयनिष्कर्षः—

लोके वाक्यगृहीतपदवाक्यसङ्कतिस्तावेऽपि पुरुषा व्युत्पित्सु' प्रथमं व्यव-हारादेव शक्तिं गृह्णन्ति। तत्र प्राणपदवाक्यसङ्कतिकथाः कार्यादिवस्तुनि तत्रैव पदहरेतः सर्वाणि गत्वा व्युत्पित्सुबालाश्चलिष्यते। तत्र वृद्धव्यवहारेषु शिल्पभूयादिकं दृष्ट्वा नूते 'चैत्रो गामानयेत्, चैत्र गामानय' इत्यादि। तच्छ्रुत्वा शिल्पादिसम्प्रदायादिभिर्ज्ञातं कल्पन्त वस्तुविशेषं पूर्वं तत्राऽवबोधसाहचर्यं। तद्दृष्ट्वा बालश्चैत्रीयगवानयनप्रवृत्तौ स्वप्रयुक्तिदृष्टान्तेन कार्यत्वावगतिपूर्वकतागतु-मिनोति—'इदं चैत्रीया गवानयनप्रवृत्ति कार्यत्वावगतपूर्विका, बुद्धिपूर्वक-प्रवृत्तित्वात्, मदीयप्रवृत्तिवत्' इति। यथाऽहं बुद्धिपूर्वकारी क्रियायां 'इदं मत्कार्यम्' इति कार्यतां बुध्येव यत्नं, तद्वदयमपि चैत्रो बुद्धिपूर्वकारी गवानयने कार्यत्वं बुध्येव प्रवर्तते इति। एवं प्रवृत्तौ कार्यत्वावगमपूर्वकत्वमनुमाय वाक्यत्वव-गमकारणं जिज्ञासमानो लिङ्गादिवाक्यश्रवणानन्तरमाविलायाल्य तत्रान्व-यमवधारयति। तत्राऽपि वाक्यानां पदानां सत्वात्तेन यदेव कार्यत्वमवधीयत इति परीक्षमाणः कार्यतोद्धापार्थं लिङ्गादिश्रवणानन्तरमाविलायाल्य तस्य यथार्थत्वं तत्र लिङ्गादेरनिष्टसाधनत्वात्। अतश्च लिङ्गादीनां कार्यरूपेऽर्थे शक्तिरिति निश्चीयते। एवं 'गौरस्ति, घटो नष्टः' इत्यादिसिद्धपदार्थेषु वाक्य

लक्षितपातुलवादगामानवेलायां आजन्मनस्कार्यान्वित एव भवतो शक्तिप्रहाणवान् कार्यान्वित एवार्थे प्रधानी शक्तिरित्यन्वयव्यतिरेकात्। यत्रत्र लोके सिद्धार्थेषु प्रवाहो य परिदृश्यते स आकस्मिकः इति।

इयं च क्रियाकार्यत्वाभावतिरोभिः एव। नेह स्वल्पः कश्चन प्रकारविशेषः आश्रयणीयः। स संस्थात्—'यजेत स्वर्गकामः' इत्यादिवाक्येषु स्वर्गकामादिपदानि पुरुषविशेषवाचीनि नियोज्यवाचकानि। यः कश्चित्कार्यविशेषे नियोज्यते (प्रेर्यते) स नियोज्य इत्युच्यते। यत्र च क्रियायां 'भवत्वयमिदं' इति कार्यतामवगच्छति स एव तत्र नियोज्यः। न हि बुद्धिपूर्वकारी प्रेक्षावान् पुरुषोऽकस्मात् कर्मणि कार्यत्वबुद्धिं लभते। न वा तत्र प्रवर्तते। अतश्च यत्साधन एव कर्मणि प्रेक्षावतां कार्यत्वबुद्धिर्भवतीति सिद्धम्। यद्यपि च लोके क्रियाया एव साक्षात्कालान्तरदेशान्तरैर्न कार्यत्वबुद्धिरुदेति पुरुषस्य। देवं तु न तथा भवितुमर्हति। क्रिया हि वाक्यप्रयोगव्यापिनी दृष्टा। यागमात्रादयोऽपि क्रिया एव। साभिरपि लक्षिताभिरेव भाव्यम्। कालस्य न क्रियावयवत्वमुपपद्यते। तत्तु कालान्तरस्थापि, जन्मान्तरभावि वा। तत्साधनत्वस्य क्रियाया स्यात् तत्। अतस्तदन्यायिकार्या क्रियायां कार्यत्वबुद्धिर्नोदेति। अकार्ये च पुरुषो न प्रवर्तते। अतो लोकतः क्रियायां कार्यत्वमवगतमपि यदि बाधितत्वात्तत्परित्यज्य कालान्तरभाविफलसंपादनायां तावत्कर्तव्यतायां किञ्चिदन्तु क्रियाऽभिधीयते इत्यभ्युपेयम्। तत्र च स्वाश्रितत्वहेतुकाभावात्मकं कार्यत्वबुद्धिरत्र सुलभा। एवं फलसाधनत्वान्वयिनि पुरुषं नियोजयतीति कृत्वा नियोग इत्युच्यते। कार्यत्वात् कार्यमित्यपि। अभावान्तरेणाऽऽनन्तर्यजनकत्वात्पूर्ववृत्तिता च। स एव च नियोगोऽपूर्वापरपर्यायो वैदिकेषु विध्यादिवाक्येषु बाधनयेन प्रतिपाद्य मानो वाक्यार्थः (१)। यद्यपि भाट्टैरपि कालान्तरभाविस्वर्गादिफलजनकत्वं यागिकस्य यागादेर्न संभवतीति अतुसाध्यसाधनाभावनिबन्धार्थं यागस्वर्गयोर्मध्ये अपूर्वं (२)

(१) नियोगादिविधिः वस्तुतो वेदे वाक्यान्तरेषु तत्।
वाक्यं वाक्यान्तरं पूर्वमिति सीमेव ॥
कार्यत्वेन नियोज्यत्वं स्वाश्रयेषु प्रेरणकृतौ।
विधेय इति नियोगादिभिर्वाक्यानि भिद्यन्ते ॥
कार्यत्वेन [illegible] वाक्यार्थः पुनः।
वाक्यं तदेव हि वाक्यं निर्वाहविषयत्वतः ॥
(तन्त्र० पृ० वाक्यमीमांसाकृत पृ० १८८)

(२) इदमेव च कार्यपदाभिप्रेतं वैधाविधेरपि स्वीकृतम् इति पूर्वं निरूपितम्।

कल्पत एव तथाऽपि न तेऽपूर्वस्य शाब्दत्वं (लिङादिवाच्यत्वम्) प्रामाण्यं वाक्यार्थस्य वाऽभ्युपगच्छन्ति। न वा तस्य नियोगादिवाच्यत्वम्। किन्तु भूतसाधनभावान्यथानुपपत्त्या कल्पितत्वाच्छब्दार्थापत्तिगम्यत्वमेवेति विशेषः। अत्रैव च नियोगस्तार्थप्रधानतया वेदे प्रतिपाद्यते। तदर्थान्येतरराशि कारकाणि। प्रतिपाद्यमेव च पुरुषाणां प्रवृत्तिः। यद्यपि फलं तत्र पुरुषैरभिलषितत्वात्प्रासङ्गिकी प्रवृत्तिस्तथापि तत्र सिद्धत्वेन तत्र प्रवृत्त्यङ्गभावात्तत्साधनीभूते नियोग एव प्रवृत्तिस्तावदस्तीति स एव प्राधान्येनाभिधीयते इति। अतो नियोग एव सर्वस्वभूतो वस्तुविशेषः प्राभाकराणाम्। स एव धर्मपदवाच्य इति सिद्धम्॥

अथेदानीं नियोगस्विरूपवाद-प्राभाकरसिद्धान्तेषु स्तोकं विशिष्टोऽपि विशेषेण न विवृतः। अन्यान्तरेषु एकादशविधो वेदोऽत्र निरूपितः। स यथा—
(१) शुद्धाज्ञाप्रेरणा कार्यरूपो नियोगः। (२) शुद्धा प्रेरणा नियोगः। (३) प्रेरणासहितं कार्यं नियोगः। (४) कार्यसहिता प्रेरणा नियोगः। (५) भावनैव प्रवर्तकत्वं नियोगः। (६) कार्यप्रेरणयोस्संबन्धो नियोगः। (७) तत्सम्बुद्धा नियोगः। (८) तदुभयस्वभावनिर्वृत्तो नियोगः। (९) विधया—(याग) रूपो नियोगः। (१०) भोग्यरूपो नियोगः। (११) पुरुषो नियोगः इति। इमे च भेदा अपूर्वं नियोगाख्यम्, प्रेरणाम्, नियोज्य-पुरुषधर्मान्कृत्वा तेषां विशेषणविशेष्यभावादिविन्यासविशेषेण सम्पादिताः। एतावत्कथनेनैव तेषां स्वरूपं सूत्रभाष्ययोरवगन्तुं प्रभवन्तीति नेतोऽधिकमत्र स्थानसङ्कटमानैरस्माभिर्विवृतेषां स्वरूपम्। इतोऽप्यधिकं विचरणमपेक्षमाणैरन्यत्र तन्त्रग्रन्थेषु जैनग्रन्थेषु तत्खण्डनाय प्रवृत्तेष्ववगन्तव्यम्। इह तेषामवतारो वर्ण्यते।

तदवगत्र लिङर्थप्रभेदनिष्कर्षः—

(१) निपिनिमन्त्रणामन्त्रणाधीष्टसंप्रश्नप्रार्थनारूपाण्यर्थाः (१) लिङः इति भगवान् पाणिनिः।

(२) विध्यादिषु चतुर्ष्वेतुत्वं प्रवर्तनात्वं, सम्प्रश्नप्रार्थने च लिङर्थं इति वाक्यपदीयकाराः।

(३) इच्छाभावनयोरेव लिङर्थं इति तत्रोऽर्वाचीना वैयाकरणाः।

(१) विध्यादीनां चतुर्णां स्वरूपं १. दृष्टे विधुत तत्रोऽवगन्तव्यम्।

(नैयायिकेषु)

(४) इष्टसाधनत्वं यत्नवत्त्वनिष्ठजनकत्वं कृतिसाध्यत्वञ्चेति त्रिलक्षणमपि लिङर्थ इति नैयायिका । तत्र विशेषणविशेष्यभावापन्नेषु त्रिलक्षणत्वेन शक्तिरिति प्राचीनाः । तत्र युगपत्पृथगेव शक्तिद्वयमिति नवीनाः ।

(५) कृतिसाध्यत्वमेव लिङर्थ इति राजशेखरशास्त्रिणः ।

(६) लिङ्घटितवाक्यघटकतयोपस्थितिरूपेण प्रवर्तनाजन्यत्वविशिष्टो लोके वेदे च लिङर्थ इत्युदयनाचार्याः ।

(वेदान्तिषु)

(७) वेदे भगवदाज्ञैव लिङर्थ इति श्रीभाष्यकाराः, तदनुयायिनस्तेषामाचार्याश्च ।

(८) इष्टसाधनत्वमेव लिङर्थ इति सुरेश्वराचार्याः, इष्टसाधनत्वमेव लिङर्थ इति मुरारिमिश्रसुखाचार्यादयश्च ।

(९) इष्टसाधनत्वं कृतिसाध्यत्वमित्युभयं लिङर्थ इति भास्करीयाः वाचस्पतिमिश्राः ।

(जोगसंबेषु (भाट्टेषु)

(१०) इष्टसाधनत्वमेव तत्त्वेन रूपेण लिङर्थ इति भट्टदर्शनिनः ।

(११) तत्तद्वाक्यार्थगतं कार्यत्वं लिङर्थ इति भाट्टेष्वपरे मतम् ।

(१२) किञ्चादि शब्दस्तत्तदर्थप्रकाशनसामर्थ्यस्याभिधाव्यवहारस्य लिङर्थत्वमित्यपरे देशीय मतम् ।

(१३) इष्टसाधनत्वमेव प्रवर्तनात्मकेन रूपेण लिङर्थ इति पार्थसारथिमिश्रसूत्रकाराः ।

(१४) इष्टसाधनत्वातिरिक्तं प्रवर्तनाख्योऽलौकिक कश्चिद्धर्मविशेषो लिङर्थ इति भट्टसोमेश्वर खण्डदेवप्रभृतयश्च ।

(प्राभाकरेषु)

(१५) अपूर्वापरपर्यायः कार्यात्मा नियोगो लिङर्थ इति प्राभाकराः । तत्र लोके कार्यत्वेन क्रियायां, वेदे च नियोगस्य लिङर्थत्वमिति विवेकः ।

तत्र नियोगस्वरूपं तस्य च लिङर्थत्वं निरूपयितुमपरैरस्माभिः, प्रकृतशास्त्रस्वरूपविवेचनाय च शास्त्रान्तरकारैः प्राधान्यतोऽभिप्रेतं लिङर्थस्वरूपमपि यथानिर्देशं प्रकाशनिर्णयितम् । अन्यच्च कंचन पक्षाः तत्र तत्र खण्डनार्थमुपात्ता

जातितुल्या इति कृत्वा न ते परिगणनावसरे प्राधान्येन परिगणिताः। तेषां स्वरूपं तत्र तत्र स्वार्थे निरूपितं तत्तत्प्रकरणे इति तत एवावधारणीयम्।

(वर्णनहारः)

एवंप्रकारेणोपपादितो यथावदिति निरर्थकतत्त्वप्रतिपादकः। नाऽत्र सुविधिसंनिवेशिते यदि विचारशीलयवधरिष्यन्तेऽस्मादृशां मन्दप्रज्ञानाम्। न वा यत्रौचित्यातौचित्यविचारोऽस्माभिः क्रियमाणस्साधीयान्। परं तु विचारशीलतो मैत्रावरुणा वरितुमर्हन्ति तत्तत्पदार्थमेव किञ्चिदिह प्रसङ्गानुरोधेन किञ्चिदुच्छेदयित्वा, अन्ते एवमध्यवस्यामः—सर्वेऽपीमे पदार्थास्तत्तन्मतावलम्बिभिः तेभिस्तुभिर्भिस्तुदूरं नाता अपि तत्त्वतो विचार्यमाणे कश्चित् कश्चिदपोऽवशिष्यते ख्यातस्सर्वाणि। ते च सुविधेयव्यूहितुं शक्नुवन्त्येवेति नेह स्म प्रकटयते। अतो वेष्टसाधनत्वावेदनाद्यस्वरूपत्वेन शिष्टमेव विधिर्वा। प्रवर्तनाहेतुत्वं व्यापारविशेषस्य तु पुरुषाभिलाषादेः कथञ्चित् तत् सम्भवति। लोके सर्वोऽपि प्रवर्तकः "अहमनमस्मिन् कार्ये प्रवर्तयामि" इत्येव जानुते किञ्चाशुश्रूषाकाले। प्रवर्तनाजनोऽपि पुरुषः—"अनेनाऽमुमस्मिन् कर्मणि प्रेरितः" इत्यवगच्छतीति सर्वस्वान्तःसंवेद्यम्। अवगम्यं च प्रवर्तेयं प्रवर्तयितुमुपेक्षेऽहं, इच्छाविषये कर्मगोष्ठिसाधनत्वादिकमनुमिनोति। यदि च लिङादिशब्दस्यमेवेष्टसाधनत्वादिकं तर्हि किमिति तदनुमाने पुरुषः प्रवर्तताम्। अतो लिङादिः प्रवर्तनामेवाभिदधाति। सा च लोके पुरुषेण स्वतन्त्रोच्चरितेषु वाक्येषु व्यापारयितृपुरुषाभिप्रायविशेष एवेच्छाज्ञाद्यभिधेयः, स्वयमभिलाषप्रत्ययं गमयेच्छब्दाभ्यां वाऽत्र प्रवर्तते इति व्यवहारदर्शनात्। येषां तु पदीश्वरस्याऽन्यस्य वा यस्य कस्यचिल्लौकिकस्य महापुरुषस्य स्वातन्त्र्येण स्वयमिच्छा नैयायिकवैयाकरणानुसारेण वाऽभ्युपगम्यते तत्र तस्यैव प्रवर्तयितुराशयो लिङाद्यर्थोऽभ्युपेयते इत्यभ्युपगमनीयम्। यदि तु भोगापवर्गसिद्धान्त एव परमार्थतः भोगतार्तीयाशयिनियमुखपरिपालनपरिरक्षणोपाय इत्यङ्गीक्रियते तर्हि यदि शास्त्रमिदं कस्य परिचयलौकिका धर्मविशेषः प्रवर्तना। सैव च लिङर्थः, इत्यनेन शास्त्रोपाकृतदाविभिरभ्युपगतः खण्डदेवादिभिरनुद्धतसाधुतरसारशीकरणीय इति प्रतिभाति। इत्थमिदार्थे प्रमाणं परमेश्वरः इत्यलम्॥

चिन्नस्वामी शास्त्री

ख्यातिवादः

वेद. भूतिशिरःख्यात्यं सौमाख्यं शुक्रयोगिनाम् ।
चन्द्रचूडचमत्कारि चिरं किमपि चिन्त्यते ॥१॥

ख्यातिर्नामात्र प्रकरणे प्रायेण भ्रमः । सा च संख्यावद्भिन्नकतत्वेन व्याख्यायते । अत्र प्रकरणे तु गुणः अपलप्यमानाः समालोच्यन्ते यथा पर्यायम् ।

(बौद्धमतम्)

तत्र सौत्रान्तिकतथागतस्य बाह्यवद् आन्तरवद् अन्यमपि पदार्थसार्थं प्रतिपद्यमानस्य विप्रतिपद्यमानस्य सौत्रान्तिकस्यानुमानागमाभ्यामेव तु तत्रीयमङ्गीकुर्वतोऽयमत्र मतविवर्तः—शुक्तिकाशकले इदं रजतमिति, आरकूटशकले हिरण्यमिदमिति, अविदुषां स्वाकारमेव रजतहिरण्यमान्तरं वह्निः शुक्तिकाशकलादौ गोचरयति । यतो व्यावृत्तं रजतहिरण्यार्थतया प्रवर्त्तमानः प्रेक्षावान् पुरुषो विषयमर्थमाबाधमनुपलभमानो विभिन्नुते 'नेदं रजतम्' 'नेदं हिरण्यम्' इति । ज्ञानविपरीतो तु मतिरियमुत्पिपाना रजतहिरण्यादिरूपा पुरोऽवस्थितां बाह्यतामेव बाधमाना बाधकमनुसरन्ती ज्ञानधर्मतामेव तयोर्व्यवस्थापयतीति युक्तं ज्ञानधर्मत्वेव भ्रमहेतौ रजतहिरण्यादीनाम् । 'नेदं रजतमिति' अतो रजतस्य धर्मित्वो बाधाकलने तु रजतं धर्मि, तस्य च धर्मं इदन्त्वं बाधिते स्यातामिति गौरव पर्यालोचनीयम् । एवं वैमाधिक-योगाचारयोरपि ख्यातिर्बोध्या । वैमाधिकस्य दर्शने बाह्यमस्त्येव वस्तु दृश्यम्, इति तत्र नास्ति स्वतोऽपि प्रकिया-कल्पनावश्यकः । योगाचारो यद्यपि बाह्यीकुरुते बाह्यवस्तुनोऽस्तित्वं तथापि आध्यात्मिकं तदस्तीति तत्रापीयमेव विगुणसर्वज्ञा । एतन्मतान्या ख्याति ज्ञानख्यातिरात्मख्यातिरिति चाभिधीयते ।

(मीमांसकमतम्)

मीमांसाबालनाबालिचर्चास्तु नेदं विचारसहं मन्यन्ते । ते हि ब्रूयुः— या खलु भ्रमरूपी रजतप्रभृतिनामात्मकपदा (ज्ञानाकारा) सौगतविचारचातुरीरञ्जितान्तःकरणानां अवतामभिमता सा न खलु समीचीना, प्रमाणाभावात् । न च इदं रजतमित्यनुभवस्तत्र प्रमाणमिति शक्यमभिधातुम्, तेन

रजतत्वं इदंकारास्पदत्वेन (शुक्तिकादिपुरोवर्तिनिष्ठत्वेन) बोधनीयत्वात्। अन्तःस्थले तु 'अहं रजतम्' इति संविदाकारतायाः, अभिन्नपुरोवर्तिन्यां अन्यथाख्यातिविवेकात्। अथ वैमतिकपक्षीयम्—इदं रजतमिति आन्तेन शक्तिकत्वेन विज्ञानेन साक्षाच्चाभ्यवहार्येति द्वे विषयौ निर्णीते। तत्र साक्षी यद्विज्ञानम् आकारविनिर्मुक्तं रजतत्वरूपम्, स्वविषयत्वलक्षणस्वप्रकाशत्वाङ्गीकारात्। अध्यवसेयं च रजताकारस्य तस्य बाह्यव्यापारवर्जनात् शुक्तिकादिनिष्ठो विकल्पकरूप इदन्त्वाकार इति विज्ञानस्याकारद्वैविध्ये विचारपरिपाटी। तथा च पुरोवर्तिन्यधिष्ठाने शुक्तिकाशकलादौ विज्ञानाकारो रजतमिदन्तेतीत्येवं इत्यनुभवे नाहन्त्वावगाहनप्रसंग इति चेत्सत्यादृष्टेर्वा यदि विज्ञानस्य साकारत्वे किमपि सुदृढं प्रमाणं स्यात्, तदेव तु न पश्यामः। न च नेदं रजतमिति बाधिका संविन्नो रजतस्य विज्ञानाकारत्वे यावत्स्वमात्रावेदितेति वर्तुं शक्यतम्, अन्यथा साक्षाद् विज्ञानाकारतापदर्शनव्यापारवत्त्वं कल्पयतो विज्ञानाकारत्वाभावानवगमात्। दुरीक्षितत्वनिषेधार्थत्वे (रजतस्य) विज्ञानाकारता कथमिति कथमप्यधिकारितरजतीयम्, अतो हि बाधविधौ रजतमिदम् इत्यनिश्चितमूर्तं रजतस्यासत्त्वानावर्तं बाधयाना अन्यान्निश्चितत्वं जनयन्ती रजतमशनिश्चितमबाधयन्ती लुप्तसमर्थं स्यात् रजतस्य अत्यन्तं सन्निधानं अतिपरुषं अनेकजनविदुषं। एवं च बाधविधा रजतस्य इदन्तावाहस्य अनिश्चेयत्वात्, रजतमेवाहमप्रसन्निहितस्य इदाकारेणेति बाधकाभावः निराकरणमात्रनिर्णीतिक्रिया सर्वं सत्यमस्तु अन्यथात इत्येतन्नाते पूर्वस्मादपि अतात्त्वावगतिरित्यत इति सुजन-सौगन्ध्यवोपः।

अथान्यथाख्यातिवादिन ब्रुवते—न खलु बाधविधा रजतव्यवहारो वारणीयः, यदि हि रजतमिदमिति भाने शुक्तिकाशकले भासमाने रजतम्, तदपि दुराशाकलम्। तथाहि—रजतत्वस्य इदमित्यंशेन शुक्त्यवगाहनं न युक्तम्, अनुभवाभिलाषात्। न च पुरोवर्तिदेशस्थितिशक्तिकारणं शुक्तिकालम्बनत्वे, शुक्तिरेव प्रकाशेन शुक्तेर्भासमानत्वेऽस्त्वनुभवविरोध इति भणितव्यम्, पुरोवर्तिता घटकर्परप्रभृतीनामप्यालम्बनत्वप्रसङ्गे कार्यविशेषात्। न च सादृश्येन रजतवित्तिप्रयोजकसंस्कारोद्बोधतोऽतथा शुक्तेरालम्बनत्वाभिधानमनुपपन्नम्, करस्थानामपि कारणत्वा आलम्बनत्वस्य दुर्निवारत्वात्। शुक्तिकाया रजतभाने कारणं तु परिशिष्यमाणं कुतो नोपादीयेत? अनुभवस्यैव बाधकत्वात्।

एवं सर्वदेशव्यवहृतजीवातुशिष्यात्मत्वेऽपि न सम्भवत्येव, यथार्थविज्ञानक्रियाजनितोपलब्धिभूतिशालिनामिन्द्रियाणां मिथ्यार्थिषु जनने सामर्थ्याभावात्। दोषसहकारी मिथ्याविदं प्रादुर्भावयतीति चेन्न दोषाणां स्वसहकारिदुष्टिमात्रोत्पादकत्वमात्रेण सामर्थ्यात्। न हि भवति दुष्टिमत्तेजसीवाक्षु यदाङ्कुरजन्म। किञ्च यदीदानीमपि मिथ्यात्वाभ्युपगमे सर्वज्ञानस्याप्रामाण्यप्रसक्तिः। तस्मात्तत्त्वं ज्ञानं यथार्थमेवाभ्येयम्। इदं रजतमित्यादि च ज्ञानद्वयम्। इदमिति शुक्तेः प्रत्यक्षं पुरोवर्तिद्रव्यसामान्यविषयम्, तत्र शुक्तित्वसामान्यमात्रो दोषात्। 'रजतम्' इति च स्मृतिः। सा च तत्संस्कारोद्बोधसहकारेण जन्मने। सेयं च विभिन्ने अपि प्रत्यक्षस्मरणे स्वरूपतो विषयतश्चातिपन्नभेदे ज्ञानयोरभेदं विषयमेवोपादायाव्यवहारं च प्रवर्तयतः। सेयमप्रमाणमेवव्यवहारं बाधमानो बाधकेनोपनीतमिव सुखकर एव। इत्थं च 'इदं रजतम्' इति प्रत्यक्षस्य लोकस्यैवंविधस्यार्थे भ्रान्तत्वमपि सुखोपजनमेव। तथाचायमेतदर्थाभिप्रायः—सर्वे विप्रतिपन्नाः सन्तोऽपि विप्रतिपन्नाः, सर्वोऽपि चोन्मत्तः, ज्ञानत्वात्, घटपटादिज्ञानवदिति। एतन्मतप्रतिपन्ना ख्याति, अख्यातिः, विवेकाख्यातिरिति चोच्यते इत्यास्तां विस्तरः।

(नैयायिकमतम्)

दुरन्तरविचारकान्तारसंचारक्लेशराशिनिर्मितिलक्षणोपासकपौरोवाणां मतमिदमसमीचीनमेवेति कर्कशतर्कवर्कशमर्शशालिनस्तार्किकशिरोमणयः स्थिरन्ते। तत्र तदीयो ऽयमाक्षेपपुञ्जः—तत्र नाम्नः पुरोवर्तिनि परिस्फुरति वस्तुनि, रजतमिदमित्यवाञ्छाभवत्। प्रवृत्तिः, रजतमिदमिति सादृश्यव्यवहारस्य भवतीति सर्वसंवादः। तत्र रजतत्वप्रकारतानिरूपितसादृश्यसंसर्गतानिरूपितेन्द्रियाच्छिन्नविशेषणतानिरूपितेनैव सम्पद्येत नान्यथा (शिल्पकृत्योः स्वरूपतो विषयतश्च अत्यन्तभेदात्) यथा खलु निखिलचेतनशीलो ब्राह्मणादिः कश्चित् किंचन रजतमिदमिति प्रवर्तते न, तस्माद् भवत् अप्रमाणम् (भेदाभावात्)। यदपि प्रमाणस्मरणं सर्वथा अगृहीतमेव तादात्म्यादिव्यपदेशनिर्वाहकं नायमर्थमिति, तदपि न सम्यक्, न हि खलु रजतमातिकार्यपृथक्स्मृतिः प्रवृत्तिं प्रयोक्तुं शक्नुयात्, इदङ्कारास्पदे पुरोवर्तिनि वस्तुनि प्रवर्तमाने पुरुषो रजतार्थी यदीदङ्कारास्पदं रजतं न जानीयात् कथं तत्र प्रवर्तेत नाम। यदभिधीयेत रजतमिदमस्तेनाप्रमाणं मनस्युपपादकम्, तदा प्रतिवक्तव्यं, रजतत्वेनाप्रमाणमुपेक्षाकारणं नास्मानेति। तस्मादुक्त-

दानीमेकान्तेनाव्यवस्थानसङ्गात्। विनिकाप्रत्यय रजतादिरोपोत्पादनेन प्रवृत्त इत्युपपद्यते, तथाहि—रजतार्थी पुरोवर्तिनि भेदाग्रहाद् रजतस्वभावारोप्य रजतजातीयस्य कन्यादेशवर्तिन उपकारकारणत्वमनुभूत्य रजतत्वेन हेतुना पुरस्ते तदुपायाय तत्र प्रवर्तते इत्येव कथः सिद्धः। न च प्रकृते रजतत्वं पुरस्थिते वस्तुनि उपकारकारणत्वमनुभावयितुं क्षमते, रजतत्वस्य इतो पुरोवर्तिनि वस्तुनि गृहीतस्वेन स्वरूपाविर्भावाभावात्। तस्माद्दिदं निर्गलितम्:—रजतादिगोचरं विमलं ज्ञानं, रजतत्वविशिष्टप्रकारत्वानिश्चितपुरोवर्तिविशेष्यकार्थं, रजतार्थनाशकत्वेन नियमेन प्रवृत्तियोग्यत्वात्। यद् यद् ज्ञानं यत्र यत्र नियमेन प्रवर्तते तत्तज्ज्ञानं तत्तद्विषयकम्, उभयस्वरूपविशिष्टं यथा रजतविशिष्टमिति ज्ञानम्। किं च आरोपिकरजतत्वस्य लौकिकसन्निकर्षाविशेषाद्गोचरज्ञानाज्ञाने विशिष्टप्रत्यये प्रवृत्तौ कल्पनस्य कारणत्वस्य शुक्तिगोचरज्ञानाधिप्रवृत्तावपि कल्पनात्वात् लाघवम्, सत्यादिप्रवृत्तौ तत्कारणम्, विसंवादिप्रवृत्तौ च भेदाग्रह इति गौरवम्। शुक्तौ रजतार्थप्रवृत्तिः, इदमर्थगोचरविशिष्टविशिष्टा, प्रवृत्तित्वात्, रजतं रजतत्वप्रकारकप्रवृत्तिवत्, इत्यनुमानस्य सत्त्वेन विशिष्टत्वस्य प्रवृत्तिकारणताकल्पनमिति च प्रमाणाप्रमितत्वकथनं वेद्यम्। एवं च असत्यरजतज्ञाने विशिष्टत्वस्यानुपयोगेन कल्पनमात्रं ज्ञानस्य प्रत्यक्षत्वेऽपि न दोषाय, कल्पनागौरवस्य अप्रयोजकत्वात् नित्यत्वस्य[1] सत्यधिकरणत्वस्यायेन नीलत्वकैरप्यकारणत्वं। यत्र ज्ञानाद्भ्रान्तिलाघवेन शुक्तिनिर्गलनं रजतमिदमिति ज्ञान इति, तत्र यत्तत्त्वज्ञानजनकत्वेऽनुभावितं, पुरोवर्तिनि रजतमिदमिति करणात्मकं निर्देशः कथञ्चार्थं सङ्गच्छतात्? शुक्तित्वस्य भासमानत्वे तत्त्वज्ञानमिति चेदेवमिति ब्रूमः।

यद्यपि ज्ञानं कारणं सामर्थ्यं निश्चिन्वन्ति न जानते, तथापि न, अनुभूतं हि कारणानां दृष्टानां स्वाभाविकार्थसामर्थ्यप्रतिनियमेन कार्यान्तरजननशक्तिशालित्वम्। यथा वृषदृष्टस्वभावान्यपि बीजानि कार्यान्तरजनकानि जनयन्ति। यथा च मन्त्रकवांधदृष्टोऽप्यनलो दहनं करोति। यत्र सर्वे विप्रमा विमता, यथार्थाः प्रत्यक्षत्वात्, इति विमतत्वाद्विप्रमाणत्वं यथार्थत्वानुमानम्, सत्यसाधु, यथार्थत्वस्य वह्नेः प्रत्यक्षतो ज्ञानात् दहनेऽनुष्णत्वानुमानवत्।

यत्र च यद्भिहितम्—भिन्नाकितिर्व्यभिचारित्वेन सर्वप्रमाणेष्वनाश्वासः इति, तदप्यपास्तमणीयम्, विकल्पप्रमाणाद्दहनात्। तथाहि—किम् अव्यभिचारः

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१ पूर्वमीमांसायां यत्रैकस्यार्थे प्रत्यक्षे यावद्भिरनुमानैरर्थो विरुद्धोऽस्ति न्याय।

प्रामाण्यम्, प्रामाण्यहेतुर्वा, प्रामाण्यव्यापको वा, येन व्यभिचारात् ज्ञानानाम्-प्रामाण्यमापादितं स्यात् (यद्यव्यभिचारः प्रामाण्यं, व्यभिचारोऽप्रामाण्यम्, यद्यव्यभिचारः प्रामाण्यहेतुः, व्यभिचारेण तद्भिन्नेन प्रामाण्याजननेऽप्रामाण्यं सिद्धमेव, यदि चाव्यभिचारः प्रामाण्यव्यापकस्तर्हि व्यापकाभावस्य व्याप्याभावव्याप्यत्वात् व्यभिचारेण प्रामाण्यव्यापकाभावसिद्धावप्रामाण्यव्यापकाभावसिद्धेः प्रामाण्यव्यापकाभावोऽनुमित इत्यादिना नाद) सर्वमेवैतन्न संभाव्यम्, सितशीतादिषु व्यभिचारज्ञानाभावे भोजनादीनां भोजनकरणेन प्रामाण्यात्, अनुमानेऽनिरूपिताव्यभिचारत्वमपि धूमादीनां कुलालादिव्यक्तिवत् अनुकूलविनश्वरादिवृत्तीनामसंबोधकत्वेन अप्रामाण्यात्।

ननु 'व्यर्थं यत्र ! महानेव प्रवादो भीमतामपि ।
ज्ञानस्य व्यभिचारित्वे विश्वासः किनिबन्धनः ?' ॥

इत्यादिशेषवृत्तिः ज्ञानगतव्यभिचारदोषशक्तिवृत्त्या कारणगतदोषेऽद्वारणा वः पुरुषार्थः ? ज्ञानेन हि स्वकार्येऽव्यभिचारः (प्रामाण्यम्) व्यपेक्ष्यत इति चेत्, किं ज्ञेयप्रकाशनेऽव्यभिचारो ज्ञानेनापेक्ष्यते ? उत संतुष्टिरूपे कार्ये ? नाद्यः, उत्पत्तौ ज्ञानेन वस्तुप्रकाशाविर्भावनात्, तत्र तेषामव्यभिचारसंपेक्षणात्। न द्वितीयः, प्रामाण्यस्य परतस्त्वेऽव्यभिचारग्राहकत्वस्य अर्थक्रियासंवादादिबाधस्य ज्ञानान्तरात् प्रामाण्यनिश्चयेऽनवस्थाप्रसङ्गात् (अर्थक्रियासंवादो नाम दूरतो वह्निबुद्धौ जातायां सति सन्निधाने दाहसामर्थ्यानुभव) अनवस्थाप्रसंगभयेन ज्ञानान्तरतः प्रामाण्यनिश्चये च अनिश्चितप्रामाण्यकत्वस्य प्रमाणत्वज्ञानस्य प्रामाण्यासिद्धेः। अनवधारितप्रामाण्यादपि ज्ञानाद् विषयसिद्धौ दूरत्वादिदोषवशात्स्खलितप्रामाण्यात्चन्द्रसूर्यग्रहणादिप्रादेशिकत्वग्रहणादपि तत्प्रादेशिकत्वसिद्धापत्तेः। स्वतः प्रामाण्ये च भ्रमज्ञानस्यापि प्रामाण्यापत्तेः। एवं च ख्यातिरन्यथाख्यातिर्वेति तार्किकैर्व्यवहियते, इत्यलं भूम्ना।

(विशिष्टाद्वैतमतम्)

विशिष्टाद्वैतवादिनस्तु अप्रामाण्यपरिहारमात्र सत्त्वानिवादमेवाभ्युपयन्ति। न हि मिथ्याप्रत्यय गगनकमलिनीकल्प निर्मूलतः। तथाहि—इदं रजतमित्यत्र, मरुमरीचिकासु इदं तोयमित्यत्र च सत्यमेव रजतादिकं भासते, शुक्तिकासु रजतावयवानां मरुमरीचिकासु तोयावयवानां च सत्त्वात्, वाक्यविवक्षासा-

मणीकरणात् रजतादीना ग्रहणात्, शुक्तिकादीनामग्रहणात्। रजतादीना सत्त्वेऽपि शुक्तिकात्वादिना व्यपदेशस्तु तत्तद्व्यवहारकुशलत्वनिबन्धन"। अत्यन्ताभिन्नत्वे यद्व्यवहारभूयस्त्वं तत्र तद्व्यपदेशः। अत एव नेदं रजतमिति प्रत्यक्षस्य बाधकत्वमुपपद्यते, स्वप्नावयवमत्त्वनिबन्धनाभावव्यवहारस्य निवर्तनमात्रेण बाधितत्वात्। चन्द्रादौ द्वित्वप्रतीतिस्तु अन्यथासिद्धा सामग्रीद्वयादेरावृत्तिवशात्-चन्द्रद्वित्वाभावग्राहकेण वा सुपपादा। अत्र यद्व्यवहारबाहुल्यं यत्रैव तत्प्रतीतिर्यथा रजतादौ रजतत्वे। अतएव न बाधो रजतप्रत्ययः। एवं च सर्वं शास्त्रं समीचीनमेवेति, एतन्मतदर्शनम्। एतदभिप्रेत्य तन्त्रताचार्यैरुक्त—"आत्मा वै सर्वविज्ञानमिति वेदविदां मतम्" इत्यलमप्रासङ्गिकेन।

(अद्वैतवेदान्तिनां मतम्)

उपनिषत्सारवादिनः श्रीमदाचार्यशङ्करभगवत्पादानुयायिनोऽद्वैतवादिनः-जुनरत्न-मत नतुष्टयप्रतिपादिन ज्ञानक्रियाफलाप श्रुतिविरुद्धमुपपत्तिप्रतिकूल चेति प्रत्याहरन्ति। तथाहि—एकमेवाद्वितीयं ब्रह्म नह नानास्ति किंचनेत्यादि-श्रुतिभिर्बलवद्भिः स्वगत-स्वसजातीय-स्वविजातीयभेदानां निरस्तत्वात्, सत्यं ज्ञानमनन्तं ब्रह्मेति श्रुत्या ज्ञानरूपस्य ब्रह्मणः सत्यत्व (नित्यत्व) प्रतिपादनात् पूर्वं दर्शनेषु श्रुतिविरोध स्फुट एव। मानसकल्पितकल्पानुवादिवस्तुमात्रकर्मसाक्षिभिर्ज्ञानोदितैरिस्तस्यापि ज्ञानस्यानित्यत्वात्, वेदान्तवारेण साक्षात्कृतत्वे तस्य ज्ञानेन विज्ञानानां बाधितत्वाङ्गीकारात् तस्यापि वस्तुनो नित्यत्वानङ्गीकारात्। उपपत्तिविरोधश्चैवम्—आगमाद्यातिरिक्त सर्वेषां विषयं निर्वाधनीय वस्तुनो। नचैतन्नसम्भवति, लक्षणाधीना हि लक्ष्यवस्तुसिद्धिस्तस्यां चानुपपन्नायां, ज्ञानाधिकरणादिप्रतिपादनिरूपणादेरेव बाधकत्वापत्तेः। अयमस्याभिप्रायः—गन्धादिलक्षणादिना पृथिवीरूपे लक्ष्यत्वकोटिप्रवेशे ज्ञाते सति 'इयं पृथिवी, गन्धात्, पृथिवी, इतरभिन्ना गन्धात्, इत्येव यथासिद्धमेतत्प्रतीतेन पृथिवीव्यवहारः, तुल्यभेदो वा साधनीयः, तत्र लक्षणज्ञानमेकस्याधारत्वेन अवगृह्यमाणिकम्, अभिचारात्, इति व्यावृत्तत्वया लक्षणज्ञानमपेक्षितव्यम्, ततश्च यदि लक्षणस्यावर्तनं लक्ष्यार्थं तत्र परस्परापेक्षाद्वयोन्नाश्रयः, एकलक्षणस्यावृत्तिर्लक्ष्याधीना, लक्ष्यस्यावृत्तिश्चावरलक्षणाधीना यदि प्रत्यक्षा परस्परस्यापक्षत्वाभावकत्वं, लक्षणे लक्षणान्तरं तत्रापि लक्षणान्तरमित्येवमनिष्टानवस्थेति।

यौगाचारो बाह्यार्थीयत्वं वदन् इत्यवश्यं एव, यतः प्रतिनियतं बाह्योऽर्थः उपलभ्यते स्तम्भः, कुड्यं, घटः, पटः, वृक्षः, मठ इति। उपलब्धिरूपत्वं तेषामर्थानां ज्ञानस्यैव, उपलब्ध्यन्तराणां सम्भवादीनां कल्पनाप्रसङ्गात्, प्रत्युतोपलम्भविषयतया सर्वेषामभावात्, नहि भवति विषयी विषयश्चैकः इति। एवं च तन्मतानां श्रुत्युपपत्तिविरोधेन बुद्धितया तन्मतकल्पिता तत्तदुपलब्धव्यार्थावगाहिनी कथाविक्रियाभ्युपेतिरेव। तस्मादनिर्वचनीयख्यातिरेवाश्रयितुं युज्यते। इयं रजतादिख्यातौ अनिर्वचनीयमेव रजतमविद्यया जनितं गृह्यते। अनिर्वचनीयत्वं च सदसद्भ्यां विलक्षणत्वम्। तथाहि-रजतं न सत्, बाधानुपपत्तेः, बाधस्यात्, मानकर्मत्वविरोधात्, बाधितत्वप्रसङ्गात्। नानिर्वचनीयं च रजतं तत्र सत्त्वस्यैव, असत्त्वे स्वरूपेणैव अप्रतीतिप्रसङ्गात्। न च ज्ञानेन प्रकाशितया सत्तयेति स्वरूपेणैव, तद्व्यभिचारात्। तद्व्यभिचारे तु तेनैव अनुमित्यादयुपपत्तौ ज्ञानिज्ञानादिकल्पनाक्लेशापत्तेः। न च सुखिनस्तनुमिति मत्वके सौरभत्वभानार्थं तन्मतत्वम्, तथापत्ते सौरभत्वं यथाभोग्यत्वव्यवहारस्य दुर्निवारतापत्तेः। न च इदं रजतमिति ज्ञानद्वयम्, विशिष्टज्ञानमन्तरेण इदन्तारजतयोरेव ग्राहिणि, अकृत्यनुपपत्तेः। एवं मरुमरीचिकादिषु तोयगन्धर्वनगरादिभ्रान्तीनामप्युपपादनीयाः। एवं स्वप्नेऽपि विषयान्तरेऽपि अनिर्वचनीयख्यातिरेव, विलक्षणेऽपि सुकरत्वमात्रात्। अधिष्ठानसाक्षात्कारात् बाधितत्वात्यन्तरत्वं संसारदशायां प्रतीयमानत्वात्।

इत्थं च कर्मेरः, आत्मख्यातिः, अन्यख्यातिः, अन्यथाख्यातिः, सत्ख्यातिः, अनिर्वचनीयख्यातिश्च निरूपिता। अन्यथा तत्त्वख्यातिः सांख्यानां वैयाकरणानाञ्च, शून्यख्यातिर्माध्यमिकानाम्, इतरस्यैव भ्रान्तौ अर्थक्रियाकारित्वाद्यभावादेवो विलक्षणख्यातिः शास्त्रकारैरुपेक्षिता इति शिवम्।

महादेवपाण्डेयः।

अथ व्याकरणदर्शनम्

निबन्धनिवेदनम्

नानाविधिसंवेदनमय भगवतीभवती सुरसरस्वतीसुधासागरनिमग्नमानसानां विद्याकलाकलापानां पण्डितताकाष्ठानां पदिये सुरभारती पुरा भगवतिशिखरपालेन, सकललोककमनीयरहा लासीत्सम्भावनाप्रवणचेतसापि सकलसंवादस्य कैव कथा भारतीयानाम् ।

आत्मसात्कामेवापन्निद्धा ऐहिकामुष्मिकफलसम्पादककर्मकलापप्रतिपादकाम्नायाश्चारो वेदा, तेषां च षडङ्गानि, इतराणि शास्त्राणि सुरवाणि च । तदुक्तं च—

आगमे ब्रह्मणस्तत्त्वं तपसा सुगमं यथा ।
प्रवर्तं छन्दसामङ्गे प्राधान्यकरणं बुधा ॥१॥

इत्यादि हरिवचनेन, "मुखं व्याकरणं स्मृतम्" इत्यादि शिक्षाकारोक्त्या, सर्वेषां शास्त्राणां शब्दरूपतया, शब्दज्ञानस्य व्याकरणाधीनत्वेन च व्याकरणस्यैव प्रधानतामवगत्य । इदं च न केवलं वेदाङ्गत्वेनापि तु—

शास्त्रेषु प्रक्रियाभेदैरविशेषोपपादनैः ।
लक्षणस्यास्तु भावानामनादि ब्रह्म शाश्वतम् ॥१॥

इत्यादि हरिवचनैः,

भगवान् शिखरपालो नाम्नां आलम्बाधुपलक्षणाः ।
शास्त्रे वर्त्मनि स्थित्वा तत्र सर्वं समीहते ॥१॥

इति भगवता च लक्षणेन शब्दसाधुत्वज्ञानार्थं कल्पितानां प्रक्रियाणां नियमपदर्शनद्वारा, "शास्त्रेषु व्याकरणवादी" ति कुतिसिद्धस्य नामाख्यातस्य स्वाकरणलक्षणा ज्ञानद्वारा वेदार्थतत्त्वज्ञानं मोक्षसाधकाद्वैतसिद्धान्तप्रतिपादकेषु दर्शनशास्त्रेष्वपि प्रधानपदमलभत ।

भगवता भाष्यकारेणापि—

"सोऽयमक्षरसमाम्नायः पुष्पितफलितचन्द्रतारकवत् प्रतिमण्डितो वेदितव्यो ब्रह्मराशिः" इत्यस्य ब्रह्मप्रतिपादको वर्णराशिरिति व्याख्यानं विदधता वर्णोपदेशस्यापि ब्रह्मज्ञानसाधकत्वप्रदर्शितम् ।

अत एव—

"सत्यातीत वर साक्षी, सर्वाकुमहमिह ।
काहलाया यदी हन् स्वानिति सम्बुद्धिरोदने ॥६॥

इति शैवागमोऽपि संगच्छते । वैयाकरणकुलकमलविकाशकेन श्रीमता भर्तृहरिणापि—

"इदमाद्यं पदस्यार्थं निर्दिष्टोपाधिवर्जितम् ।
इदं च नाम्नोऽनानाभिर्जिह्वा राजपदानि ॥६॥

इत्यादिना स्वाहमेवाहं श्रीमत्तापकस्वरूपरीतिम् ।

किं बहुना,—शब्दादिगुणानुद्धारायैव सर्वोपजीवनोऽपि आगमो विवेकोपदिष्ट इति नास्ति वाक्यसाधकत्वे सन्देहलेशोऽपि । अत एवेदं शास्त्रं पाणिनिदर्शनमात्मा परिहृत्य वर्णते । इदं च स्फोटाख्यं ब्रह्म न केवलवर्णवाचकं सर्वशब्दानां अपदो मूलकारणमपि, अन्यानाश्च कैवल्यप्राप्तोऽपि भवति । मूलकारणे मानं युक्तिरिति सर्वथा सिद्धान्तात् । तदुक्तं हरिणा वाक्यपदीये—

"शब्देष्वेवाविता शक्तिर्विश्वस्यास्य निबन्धनी ।
पदजातिषु शब्दोऽन्य स्वात्मानी सृज्यते यत ।
तस्यार्थक्रियाः सर्वा शब्दमात्रा सुनिश्चिता ॥१॥
शब्दस्य परिणामोऽयमिति वाक्यविदो विदुः ।
छन्दोभ्य एव प्रथमं प्रसिद्धेर्वेदसंज्ञितम् ॥२॥ इति

ओंकारस्य शब्दलक्षणस्य लक्षणस्य जगतो मूलकारणत्वं चाङ्गीकृतमेवेति शब्दे जगत्कारणत्वलक्षणकृतम् ।

कपिलस्य रचनाशैली, दर्शनशास्त्ररचनाशैलीविसदृशीति नेदं दर्शनशास्त्रमिति वदन्ति । तथा हि—

"सर्वेषु दर्शनेषु प्रथमं सूत्राणि पश्चाद्भाष्यम् । ततः सूत्रेषु वार्तिकम् । अत्र तु प्रथमं सूत्राणि ततो वार्तिकम् । ततो भाष्यम्" इति, तत् न विचारसहम् । सूत्रभाष्यवार्तिकानां क्रमेणैव सन्निवेशः दर्शनमिति राजकीयपुस्तकाधिकरणस्य तत्रत्यस्य काण्डद्वयस्य खण्डकस्य निर्युक्तिकत्वात् । तथाऽपि वा, अन्यापि शैली नाहदेवरादि चतुर्दश सूत्राणि । तेषां व्याख्यानरूपं पाणिनीयं भाष्यमष्टाध्यायीस्थं तदुपरि च वार्तिकम् ।

पातञ्जलं भाष्यं तु सर्वस्यापि टीकारूपम् । अतः एवेदं महाभाष्यमाम्नो वसिष्ठेन । इति सर्वमनवद्यम् ।

केचित् शब्दसाधुत्वमात्रप्रयोजनकेऽत्र शास्त्रे पदार्थविचारः फाकहस्तपरीक्षावदुपहास्यमेवेति वदन्ति । तत्र विचारस्तावत् । यदि हि, व्याकरणं शब्दसाधुत्वमात्रप्रयोजनमेव स्यात्तदा शब्दानां नित्यतया तेषां साधुत्वस्य च सिद्धतया विफलमेव शास्त्रापादनं । किञ्च पदार्थज्ञानमन्तरा शास्त्रार्थो लब्धुं कर्तुं वा न सम्भवति, न हि गुणादिपदार्थज्ञानमन्तरा "द्रव्यं गुणवत्" (४।१।४४), "जातेरस्त्री विषयादयोपधात्" (४।१।६३) इत्यादिशास्त्रार्थावगमः शक्यते कर्तुम् । अत एव—"के पुनः पदार्थाः कथं वा एषु विचारः क्रियते, किं वा शास्त्रं, अर्थो वा" इत्यादि भाष्यादिषु शङ्क्यते ।

यथाह्यत्र शास्त्रे के कति वा पदार्थाः, तत्र तत्र प्रयुक्ता द्रव्यगुणक्रियाजात्यादिशब्दा न्यायशास्त्राभिमतार्थवाचकाः, तत्रो विलक्षणार्थवाचकाः कथमादिविचारः स्वकल्पितया त्रिमुनिमतेन क्रियते, तथाप्यत्र विचारः यथावसरव्याकरणेषु, प्रायाणां वाक्यपदीये विवेचिता एव । ये चेदानीन्तनानां वैयाकरणानामाचार्यशास्त्रविचारमात्रतात्पर्यापनतालिकाभावेन, लाकस्यस्थानां महाभाष्यादानां सम्यगाकलनमात्रकरणेन च तत्र तत्र शब्देषु सम्भाव्यमानस्य इव बुद्धिपथे आरोहन्ति ।

अतीते प्राचीनसमये संग्रहनाम्ना प्रसिद्धो महान् वैयाकरणनिबन्धः । तत्र च व्याकरणदर्शनस्य व्याख्यातिरासीत् । सोऽपि तात्कालिकानां विदुषामुपेक्षावशात्कालाहोपतापाकस्यात् । तदनन्तरं तत्प्रतिपादितार्थप्रतिपादनाय पतञ्जलिना भाष्यमुपनिबद्धम् । यद्यपि तेषामनेकोपेक्षावशात्लुप्तमभवत् । केवलं दाक्षिणात्येषु पाठमात्रेणावशिष्टमासीत् । तथा भाष्यप्रतिपादितार्थप्रतिपादनाय धरित्रा वाक्यपदीयं रचितं ।

"तदा चोक्तं वाक्यपदीये—

"प्रायश्चित्तं संग्रहनीलप्रियापरिवृढान् ।
सम्प्राप्य वैयाकरणान् सम्प्रहेऽस्मिन्नुपागतं ॥१॥
कृतेऽत्र पतञ्जलिना गुरुणा तीर्थदर्शिना ।
सर्वेषां न्यायबीजानां महाभाष्ये निबन्धने ॥२॥

वैजिलीभिरहर्वक्षे शुल्कनकीनुसारिभिः ।
आर्यं विद्वाविवे मन्ये सभाप्रतिकरुपुके ॥३॥

न्यायवयाकरणार्थिलाभ्यस्य स्वं च दर्शयन् ।
प्रवीणो गुरुशास्त्रकायमाणसंग्रह ॥४॥" इति

अथवा च केवलमाचार्यो महाभाष्यावलोकनेन बुद्धिप्रकाशेन इमे विधत्ते, "अवद्विरामवलरदानाय वर्णोति न" इति कविचक्रवर्तिनो भाषाय सूक्तिमनुसरन्ता, चतुष्टयी शब्दानां प्रवृत्तिरिति भाष्यवचनं मनसि कृत्वा केवलं चत्वार एव पदार्था द्रव्यगुणकर्मजातिरूपा। अथवा पुरत उपस्थाप्यन्ते ।

अथ व्याकरणदर्शनम्

पदार्थश्चतुर्विधः । द्रव्यम्, गुणः, कर्म, सामान्यं चेति । तथा चोक्तं भाष्ये—"चतुष्टयी शब्दानां प्रवृत्तिः । जातिशब्दाः, गुणशब्दाः, क्रियाशब्दाः, यदृच्छाशब्दाश्च" इति । अर्थानां चतुर्विधत्वात्तत्प्रतिपादिकाः शब्दा अपि चतुर्विधा इति तात्पर्यम् । अतएव भाष्ये—"अथ गौरित्यत्र कः शब्दः" इति शङ्कायाम्, "द्रव्यं नाम तत्, गुणो नाम सः, क्रिया नाम सा, जातिर्नाम सा" इति वदन् भाष्यकारोऽपि पदार्थे चतुष्टयमेव प्रदर्शितवान् ।

सर्ववस्तूषु द्रव्यत्वोऽपि—अभिधेयं चतुर्धा, जातिगुणक्रियायदृच्छाभेदेन, गौः, शुक्लः, पाचकः, दित्थ इत्युदाहरन्ति । द्रव्यपदेनाद्रव्यमात्रप्रवृत्तिनिमित्तत्वा दित्थादिशब्दा गृह्यन्ते । यदि तु—दित्थपदवाच्यत्वं व्यक्तिविशेषस्य दित्थत्वेन प्रतीतेस्तत्रापि दित्थत्वं जातिरेव, एकव्यक्तिमात्रवृत्तिधर्मस्य जातित्वाभावकत्वस्यानङ्गीकारात्, अत एव क्वचिदाकाशत्वमपि जातिरूपम्, इत्युच्यते तदा तत्रापि दित्थत्ववृत्तिनिमित्तकं शब्दं । अत एव "त्रयो वा शब्दानां प्रवृत्तिः" इति भाष्ये दित्थादिशब्दः । सत्यवायसमवायत्वयोरपि जातिप्रतीतिनिमित्तकत्वमेव । अनुगताकारप्रतीतिजनकत्वस्यैव जातित्वस्य वक्तव्यमात्रत्वेन, तत्रापि समवायत्वादिजातिसिद्धेः । किन्त्वनयोर्भाष्ये क्वचित्तत्वार्थं न कृतमिति नात्रोपेक्षोऽस्य कृत इति ॥

अथ द्रव्यम्

लिङ्गसंख्यान्विते द्रव्यमिति केचित् । अतएव संहितत्वात्सर्वविभक्तिरिति सूत्रं भाष्यं च ।—"शौक्लयुक्लकानि सत्त्वगुणाः, एकत्वद्वित्वबहुत्वानि च" इति । शुक्लकिरणवन्तो द्रव्यविशेषाः । तदुक्तम्—"तस्य भावस्त्वतलौ" इति सूत्रे भाष्ये, "किं पुनर्द्रव्यम्, के पुनर्गुणाः, रूपरसगन्धस्पर्शवन्तो गुणास्तत्तेभ्योऽन्यद् द्रव्यम् । तद्यथा, तस्य शुक्लान्तरेषु शाकुमेवत्वमिति तत्त्वं न विज्ञायते तद्द्रव्यम् । यथा, रक्तालक्तकादीनां फलानां रक्तादयः, गीतादयश्च गुणा प्रादुर्भवन्ति, आगतेन नवरसेन्द्रियेण । अन्यत्र अलक्षि गुणसमुदायो द्रव्यम्" इति । अतएव कैयटेन भीमस्वरादिवत् जातिगुणक्रियाभ्यस्तत्त्वं द्रव्यगुणयोः इत्यन्तर्वर्तिनमुक्तं तत्त्वपदस्य । एतदनुसारेणैव "गुणसमुदायो द्रव्यम्, गुणसमूहो वा द्रव्यमित्यनयोरपि गुणानां समुदायो यस्मिन्निति बहुव्रीहिणा गुणाश्रयत्वमेवार्थः । एवं च गुणक्रियाश्रयत्वेन विशिष्टतादृशं द्रव्यमिति लक्षणं सम्पन्नम् । वाक्यपदीयेऽपि—

"वस्तुसत्तां यत्र सर्वनाम प्रयुज्यते ।
द्रव्यमित्युच्यते सोऽर्थो भेदत्वेन विवक्षितः ॥१॥

इति द्रव्यलक्षणमुक्तम् । यत्र वस्तुसत्तां पदार्थोपलक्षकं सर्वनाम प्रयुज्यते तद्द्रव्यम् । यथा घटादिषु तत्तावयवेषु । ननु घटे नीलरूपं तत्र घटत्वेन तद्विशिष्टो गुणश्चापि सर्वनामपदार्थोपलक्षणम् । तस्यापि द्रव्यस्वाभिप्रेत आह—"भेदत्वेन विवक्षित" इति । विशेषणत्वेन विवक्षित इत्यर्थः । तथा च गुणस्य विशेषणत्वेन विवक्षाभावान्नातिव्याप्तिः । अत एवेदं तद्विशिष्टं सर्वनामपदार्थमपेक्ष्यान्यत्र द्रव्यम् । 'स्वार्थस्य यत्र विशेषणत्वेन' — इत्य तदुक्तम्' इत्यपि सूत्रेणोक्तम् । सिद्धान्तो योऽर्थः स्वार्थस्य विशेष्यतया विवक्षितत्वात्तद्द्रव्यम् इति तदर्थस्तदीयकारणमुक्तः । एवं च लक्षणं नवसु पृथिव्यादिषु वर्तते, इति तानि द्रव्याणि । परन्तु जैनानि कणादि परिगणितानि "एतानि नव द्रव्याणीति ।

अथ गुणाः

महाभाष्ये (४ । १ । ४४)—"सत्येऽपि विशिष्टतेऽपि, गुणस्तावित्तु दृश्यते । आधेयश्चाक्रियाजश्च, सोऽत्यन्तप्रकृतिर्गुणः ॥१॥" इति लक्षण-

युक्तम्। तद्यथैव—यः सत्त्वे द्रव्ये अभिनिविशते द्रव्यलाञ्छने इति यावत्। ततोऽपैति निवर्तते, इयमजातिषु भिन्नजातिषु दृश्यते। जातिव्यावृत्तिरूप इत्यर्थः। क्रियायामपि तत्र साधन इत्यादि। साधनं, यथा, पाकजो रूपादि, आक्रियाः, अनुमानाः, यथा, वस्त्रोत्पादकरूपादिकः। उभयविधत्वे यत्र वर्तते स शुद्धः, क्रिया तु सर्वाऽपि जातिरेवेति न दोषः। द्रव्यवाचकाय, अनन्यशक्तिरिति। गुणत्वस्वभावः, द्रव्यभिन्न इति यावत्। एतदर्थं-कथनं तत्रानान्तरत्वेऽपि तत्रैव। तथा—

"अनेकद्रव्यजात्यन्वयं दृष्टो गुणस्तत्रैव।
वाचकं सर्वलिङ्गानां द्रव्यवन्तो गुणा स्मृताः ॥१॥

इति। स्पष्टोऽर्थः। एवं च भिन्नजातिषु विद्यमानत्वे सति नित्या नित्याश्च विद्यन्ते सति द्रव्यभिन्नत्वं गुणत्वमिति सामान्यलक्षणम्।

यद्यपि—"गुणा ये" इति प्रथमे कथनसामान्यशब्दः इतीयोऽर्थ भाष्ये कृतम्, तथापि—पश्चात् भूताना प्रसिद्धा इमे गुणा इत्यनेन तात्पर्यम्, नलक्षणमात्रमेव। अत एव "आनुपूर्वेण नाम गुणः" "उदाहरणमात्रं गुणः" इत्यादि व्यवहारोऽत्र तत्र भाष्यकृता सामान्यतः।

अथ क्रिया

कारकान्वयिलक्षणाक्षेपकधर्मवत्त्वं क्रियात्वम्। कारकस्य क्रिया-साधनत्वात्। तदुक्तं भाष्ये—"साधने कर्मणि क्रियाया विधीयन्ते, साधने च क्रियाया" इति। केचित्तु कालान्वयिलक्षणाक्षेपकधर्मवत्त्वमेव क्रियात्व-मिति वदन्ति। तदयुक्तम्—"क्रियासमेदाय कालस्तु संख्या सर्वत्र भेदिका" इति। अपरे तु—धातुवाच्यतावच्छेदकविशिष्टकारकत्वमेव क्रियात्वम्। तैर्लक्ष्यमत्र कालवाचकत्वस्वरूपम्। इयं च प्रत्यक्षस्य न विषया किन्त्वनुमानस्य। तथा चोक्तं धातुपाठसूत्रे भाष्ये—"का पुनः क्रिया? ईहा। का पुनरीहा? चेष्टा। का पुनश्चेष्टा? व्यापारः। सर्वेषां भावानां शब्देरेव शब्दानामपि न किञ्चिदसंजातं निर्देशमर्हति जातीयका क्रियेति। क्रियाजातीयस्यैव परिग्रहो न गुणस्य। पिण्डीभूतं निर्देशमर्हति यथा गर्भो निलुठितः। सा कुमरनुमानगम्या। को ऽसावनुमानः। इह सर्वेषु साधनेषु सन्निहितेष्वपि कदाचित्पचतीति व्यवहारो भवति कदाचिन्न पचतीति वह्निसन्निहिते पचतीति व्यवहारो भवति सा क्रिया नाम"। तथा चोक्तं हरिणापि—

"विसदृशा बाला इव दहनानां न सदृशैः विकृतिः सन्निपाते ।
करणैः तां जैवकणे विभागः सूक्ष्मैः स्थितैः अतुलितैः गगने" ॥६॥

यथा विसदृशे दहनाने विसदृशतया बाला दहनानां नोपलभ्यन्ते तथैव क्रियाऽपि न चक्षुरादिनोपलभ्यत इति भावः । अस्तु तरसु द्रव्यवत्संयोगजत्वेन नाम्ना अवधेयम् । संयुक्तसमवायेन तु भवत्येव । अत एवाह "न शक्यते पिण्डीभूता निर्दर्शयितुम्" इति । एतेनाऽऽकाशगमनवाक्यः सत्यं भवत्येवेति सूचितम् । यथा चोक्तं हरिणा—

"क्रियावत्सत्सु चेयात्मानो न समूहिनाम् ।
सङ्ख्यासुविभर्यायैः सम्बन्धं चक्षुरादिभिः ॥६॥"

इति । अत्र नाम्नस्तस्यावाचो नेयात्मानो न प्रत्यक्षविषयाः, किन्तु सङ्ख्यासुविभर्यैर्ज्ञानप्रत्यक्षकारिभिः चक्षुरादिभिः सम्बन्धं यान्ति । इत्यनन्तरान्तरालं क्रियायाः प्रत्यक्षं न स्वत इति तात्पर्यम् । सर्वथा क्रियाया अप्रत्यक्षत्वे तु पराक्षे लिङ्गे वराक इत्यन्यायस्तेऽन्यथा स्यात् ॥

अथ सामान्यम्

अन्ये (४।१।६६)—द्विविधं जातिलक्षणं वर्तते । एकं तावत्पारिभाषिकं स्वसाधनानवच्छिन्नोपाधीनि, द्वितीयं तौत्रिकम् । तत्र प्रथमलक्षणं त्रिलक्षणम् । १—आकृतिलिङ्गता जाति । आकृतिरवयवसंस्थानं सदृशं ज्ञापकं यस्याः सा । यथा गोत्वादिकम् । २—लिङ्गानां च न सर्वथाऽऽ । सङ्कीर्णत्वात्तिर्यग्जा । लिङ्गत्रयाभावस्तु सति, एकत्र व्यक्तावुपदर्शने व्यक्तान्तरेऽपि ज्ञातुं शक्यता सा सेति द्वितीयं लक्षणम् । यथा मानुषत्वादिकम् । एकत्र मानुषत्वे ज्ञाते अन्यत्रापि मनुष्येऽपि ज्ञातुं च शक्यमिति । ३—गोत्वं च चरणीः सन् । अन्यत्रिलक्षणवान्तः शास्त्रान्तरानी च जातिकार्यकम् । यथा—शीघ्रगतौ, कठी इत्यादि । द्वितीयलक्षणं यथा—

प्रत्युभावविनाशाभ्यां नित्यस्य गुणवद्गुणौ ।
अनर्थक्रियः बहुधा वा जाति वदयो विदुः ॥१॥ इति

या इत्यर्थोत्पत्तिविनाशाभ्यामाविर्भावतिरोभावौ प्राप्नोति, गुणौ सह वर्णोपूर्वकम्बन्ध, यथा । निर्गुणस्य द्रव्यस्य वापसम्बन्धता जातिरहित स्यादोत्पत्ति । लिङ्गत्रयाभावयोगी, बहुधा सर्वव्यक्तिव्यापिनो वा सैव

जाति। यथा घटत्वपटत्वादिकम्। अनेन वा प्राप्यते वा जातिरिति (५।२।६५) सूत्रे भाष्ये। तत्र अनेनेत्यस्य अवयवेनेत्यर्थः। यद्यपि शुक्लादयो गुणा अपि अप्रयत्नलभ्यास्तथापि तत्रातिव्याप्तिवारणाय प्रकर्षपर्यन्तरहितं विशेषणं देयम् यथा कार्क भाष्ये—

"न चैतदार्थस्य प्रकर्षपर्यन्तं स्य" इति। एवं च चिन्तादयोऽपि जाति शिष्यन्तीति कैयट। तत्रभेदा व्यक्तय एव जातिरिति इलन्तायेति सूत्रे कैयट।

तदयुक्तं भाष्ये—"एकसामान्याद्वा" सिद्धम्। एकोऽपि सामान्या व्यक्तन्नाम, तथा गुणभेदादन्यत्वं भवति इत्यादि।

सा च जातिः, एका, नित्या च। तथा चोक्तं भाष्ये—"यदु तोहि तोहित्वम्, यद् गवि गवत्वं तदेकम्। भिन्नेष्वभिन्नं, भिन्नेष्वभिन्नं सामान्यम्" इत्यादि।

वाक्यपदीयेऽपि—जातिर्हि भिन्नेष्वर्थेषु स एवायमिति बुद्धिनिबन्धनम्' सा च जातिः सर्वत्र वर्तते। तथा च कैयट—"आकृतिः पदार्थः" इत्यस्य व्याख्यायामेतदाह शब्दा भिन्नद्रव्यसमवेता जातिमभिधत्ते, शुक्लादय शब्दा गुणसमवेता, क्रियासमवेता जातिरस्त्येव। "गोत्वाश्वत्वे सामान्ये" इति प्रतीत्या सामान्येऽपि सामान्यं वर्तते। अभावाश्वत्वादि इति प्रतीत्याऽभावेऽपि सामान्यम्। परन्तु तदनिर्वचनीयमिति तत्त्वसूत्रे कैयटः।

सामेशस्तु—सकलेऽभावत्वमेव जातिः, अनुगताकारप्रतीतिजनकत्वेन जातित्वादित्याह। तच्च सामान्यं परापरभेदेन द्विविधम्। अत एव—'सामान्यभूतं शब्दः' इत्यस्य व्याख्यावसरे सत्तासामान्यं, महासामान्यं, गोत्वादि सामान्यत्वोपसानं निर्विवादमिति कैयटनेति दिक्॥

सप्तिकाप्रसादोपाध्याय

हिन्दुओं के कुछ संस्कार

संस्कार का अर्थ, न्यायसिद्धान्त के अनुसार "आत्मा में अनुभव से उत्पन्न स्मृति को जबुद्ध करनेवाला" एक विलक्षण गुण होता है। वेदान्त, सांख्य और योगशास्त्र के अनुसार "अन्तःकरणरूप उपाधि से भूषित चेतन या आत्म तत्त्व का धर्मविशेष" माना जाता है। मीमांसक "योग्यता" इत्यादि स्थल में योग्यता आदि के द्वारा अचेतन नीहि आदि में भी संस्कार मानते हैं। वैसे लोग चारा आदि चतुष्पदों का, ज्योतिषी लग्न का, कारीगर अपने औजारों का, कृषक खेत आदि का, हम अपनी पुस्तकों का, हमारे मित्र कोट, वस्त्र आदि का भी, संस्कार करते हैं। कहने का तात्पर्य यह है कि "उपयुक्त देश, काल, पात्र, विज्ञ कारीगर तथा अन्य साधनों के द्वारा प्राकृतिक किसी भी वस्तु में एक विलक्षण शक्ति का सचार करना या वर्तमान शक्ति को दूषित होने से बचाना ही संस्कार है।" यह संस्कार दो हिस्सों में विभक्त किया जा सकता है, एक प्राकृतिक और दूसरा कृत्रिम। प्राकृतिक संस्कारों को प्रकृति स्वयं अपने हाथों से सतत सतत पर किया करती है, उसके लिए हमें यहाँ कुछ करने या सोचने की आवश्यकता नहीं है। दूसरे संस्कार वे हैं जिन्हें प्राकृतिक संस्कारों के साथ साथ प्रायः प्रतिदिन को आवश्यकतानुसार हर एक वस्तु में करना पड़ता है। आपने शायद बया के घोंसले को देखा होगा, अत्यन्त सुकुमार तृणों को इधर-उधर से एकत्रित कर बड़ा ही विचित्र कारीगरी के साथ उसका निर्माण किया जाता है, इसके अन्दर कितने ही सुन्दर छोटे छोटे कमरे होते हैं, किसी में भोजन की चीजें, किसी में साफ-सुथरे वस्त्रों के छोटे छोटे गट्ठे बच्चे होते हैं, किसी में उसकी शयनव्यवस्था सोचें और प्रातः आनन्द में अपनी बेटी बंशी की धुनि में राग अलापती हुई इन लोगों की नींद को हरण करती है। उसकी बाहरी सजावट भी देखते ही बनती है। मेरी समझ में कोई कितना ही बड़ा कारीगर क्यों न हो, पर इन सूखे घास के पत्तों से इतना सुन्दर और ठीक उसी ढंग का घोंसला

नहीं तैयार कर सकता है। उनके पास विशेष अस्त्र-शस्त्र भी नहीं होते, न तो इस कला की शिक्षा के लिए कोई स्कूल या कालेज ही खुला है, पर वे भी वे अपनी कारीगरी से हमें मुग्ध किए देते हैं। वस्तु, जो कुछ भी हो पर मानना ही पड़ेगा कि उपयुक्त तूलों को यथासमय संरक्षित करके घोलकर निर्माण की पद्धति उन्हें अपने माता-पिता या बन्धुजनों से सीखनी पड़ी होगी, अथवा उनके माता पिता का ही कुछ विलक्षण संस्कार होगा, जिससे गर्भ ही में यह कला उन्हें प्राप्त हो जाती होगी।

इसी शरद् ऋतुओं को ही आवश्यकतानुसार समय समय पर सभी वस्तुओं का संस्कार करना पड़ता है, प्रचण्ड वार्षिक की लहलहाती हुई ज्वाला से चिरसंतप्त वसुधा को नवीन उदारता, गम्भीरता, आशीर्वाचन और उत्साहपूर्ण मधुरालाप के साथ जीवन प्रदान करने के अनन्तर दिगङ्गनाओं से गीयमान यशोभवलित विपद धारण करने के उपरान्त आज ही की कीर्ति से शुभ्र राजहंसावली के साथ काश चमर को आलोड़ित हुई अनेक के रङ्ग को भङ्ग करने की अभिलाषावाली चञ्चल चाँदनी से सुशोभित विचित्र चित्रित वितान के शोभाभार में लोकाकार कारीगरी के साथ बुने हुए रङ्ग-बिरङ्गे गलीचों से—सुशोभित नन्दनवन के कुञ्जों का भी लज्जित करनेवाले रंगमंच के ऊपर पर्यन्तदेव का अभिनन्दन करने की उत्कण्ठा से शरद् के आ जाने के बाद एक दूसरा ही युग उपस्थित हो जाता है, सौरभ से लदा हुआ वायु इतना मन्थर हो जाता है कि मानों यौवन के सभी उमङ्गों का हाहाकार मचानेवाली बड़ी बड़ी नदियों को तीव्र धारा में बहा डालता हो। पर्वतों का, नदियों का, सरोवरों में खिले हुए कमलों के साथ कल्लोल करती हुई मछलियों का, कुञ्ज और वृक्षों के गुच्छों से लाद ही को उपहार करने के लिए उत्कण्ठित तूलों का, सौन्दर्य तो सराहते ही बनता है। निर्मल नभ में खिले हुए तारों और चन्द्रमा के सहित मुसकराती हुई रात्रि के सौन्दर्य का तो कहना ही क्या है, मानो इस अगाध पयोधि में जन्म हो जाने के भय से ही पीछा के साथ बड़े बड़े कवियों की भारती ने खिले हुए कमलों तथा तैराक राजहंसों का आलय ले रक्खा है। रात्रि के विलास में टूटे हुए हारों को, घासों के ऊपर बिखरी हुई मुक्ताओं को प्रातःकाल लूटते हुए सूर्य को मानों इसी बात से कुछ लज्जित हो रहे हैं। इस नवीन युग और शुभ अवसर में कहीं प्रसन्नता, उत्साह और परिश्रम

के साथ कृषकगण कुएँ को हल करते हैं, कोई खाद से खेतों को सबल बनाता है, कोई सींचता है, कोई गलपर्ण के बल से रक्षित हुए बीजों का परिष्कृत करता है, कोई गेहूँ के लिए उपयुक्त खेतों में गेहूँ, तो धान के खेत में धान बोता है। कुछ लोग पौधों के नग जान के उपरान्त "कृषी निरावहिं चतुर किसाना" इस तुलसीदासजी के मन्त्र का स्मरण करते हुए उनकी शक्ति में हानि तथा कुसंस्कारों को पैदा करनेवाले अन्य तृणों को अलग किये देते हैं। कोई उनकी रक्षा के लिए बाड़ा तैयार करता है, तो दूसरा बिना विघ्न-बाधाओं के फसल को सफल करने के बदलेय से देशाचार और कुलाचार के अनुसार भैरवाल भागपाल आदि देवताओं की आराधना में दत्तचित्त हो रहे हैं। इस प्रकार अच्छे कृषक अनवरत उद्योग और उपायों के द्वारा, एक खाँटे से गेहूँ के बीज से सैकड़ों फसल अधिक या उसके समान ओजस्वी वलिष्ठ देश और समाज के लिए प्राणों तक का पण कर देनेवाले सैकड़ों बीजों का तैयार करके अपने को कृतकृत्य समझते हैं; पर बेचारे दुर्बल कृषक, जिनके खेत अच्छे नहीं तैयार किये गये, या कभी अनवरत से देखादेखी बोते गये थे, अथवा जिनके बीज कच्चे, घुने, या दुर्बल थे, उनकी भावाशा पौधों को देखते ही मुरझाने लग जाता था, पहले तो कितने उगते ही नहीं, जो उगे थे ऐसे दुर्बल थे कि थोड़ी सी भी विपत्ति आ जाने पर ढेरा कूच करनेवाले थे। इससे भी जो बचे उनकी वह छोटी सी मूर्ति दो चार हलके दानों का भार पर रख कर भार से उगमगाती हुई कृषक महोदय के सम्मुख अपना कुरबान पेश कर देती थी। पर अब महाशयजी कर ही क्या सकते थे "समय चूकि पुनि का पछिताने।"

मानव-संस्कार—इस ठीक यही दशा हमारी भी है, यदि हम उचित उपायों के द्वारा ठीक समय पर शरीर, मन, या आत्मा का संस्कार न करें तो "खाय गये अरु आलहि बालहि" के हिसाब से स्वयं तो निर्बल, रुग्ण, बुद्धिविहीन होंगे, परन्तु अपनी मूर्खता, निर्बलता और भीरुता के झकोरों से भावी संतान की बुनियाद को भी जोर-जोर हिला जायँगे।

आर्यसंस्कारों की महत्ता—यों तो सारे देश की समस्त सभ्य जातियाँ अपने देश के नियमों के अनुसार उचित समय पर अपने तथा

अपनी सन्तानों के संस्कारों को करती ही हैं, पर हमें इस बात का बड़ा हो गर्व है कि आज तक भी मानव-आकार-पद्धति में हमसे आगे तो क्या उस सीमा तक भी कोई नहीं पहुँच सका। हमने लालचर्य-आदि संस्कारों के बल पर भीष्म, हनुमान, राम, कृष्ण, अर्जुन, भीम आदि अनन्त वीरों को पैदा किया है। जिनके सामने बड़ी बड़ी विशालकाय-वनू लताएँ भी सदा के लिए धरा की गोद में विलीन हो जाती थीं। इन्हीं संस्कारों के माहात्म्य से हमने उन आत्मतत्त्वों का अन्वेषण किया है, जो आज के दिन सभ्यता, निर्लज्जता और शिक्षाओं के ऊँचे से ऊँचे शिखर पर पहुँचे हुए धुरन्धर विज्ञानवेत्ताओं के दिमाग में चक्कर पैदा कर देते हैं और उन्हें लाचार बनाता है कि हम सभी वहाँ तक नहीं पहुँच सकते।

प्रथमाश्रम—हम चाहे सम्राट् के कुमार हों या गरीबों के बेटे हों, आठवाँ वर्ष उपस्थित होते ही गुरुओं में, गुरु के भोंपड़ों में, शक्ति और सामर्थ्य के यथेष्ट रहते हुए भी वृक्षों के पत्तों से शहर की पूर्ति करते हुए, देश और समाज के हित की चिन्ता में नदियों में घूर उन गुरुओं, और महर्षियों के आश्रमों में वाध्य होकर जाते थे। हम वहाँ वेदों का अध्ययन करते थे। हम वहाँ धनुर्वेद के अभ्यासों से विवाह कराये जाते थे, वहाँ हमें राजनीति, समाजनीति और धर्मनीति में विज्ञ बनाया जाता था। वहाँ हमारी नसों में धृति, क्षमा, दम, अस्तेय, शौच, इन्द्रिय-निग्रह, धी, विद्या, सत्य और अक्रोध के उपदेश कूट कूट कर भर दिये जाते थे। इसके साथ ही साथ "मातृदेवोभवपितृदेवोभव" का भी पाठ पढ़ाया जाता था। समय के हम इतने पक्के बन जाते थे कि ठिक ठिक करनेवाली घड़ियों के न रहने पर भी पल और विपल के न जाने कितनी सीढ़ियाँ आगे के समय के अन्तर का भी विचार करते थे। इतना ही नहीं, आकाश के लिए भिन्न तौलनी पड़ती थी। लकड़ियों से हकड़ियों के गट्ठे सिर पर लादने पड़ते थे। गौवें चरानी पड़ती थीं। आर्य और बाल-काल कुशासनजिथ और कमण्डलुओं से कलकल कतार की कतार बनी हुई मन को हरण करनेवाली वेदियों के ऊपर गोमय, शमी और पवित्र पलाश की लकड़ियों में लहलहाती हुई अग्नि की उदीप्त ज्वाला में पुलकित मन से, इन्द्र की अमरावती तक, विष्णु के वैकुण्ठ तक,

और विश्व के कोने-कोने तक गूँजनेवाले, जगत् को चकित करनेवाले, दुष्टों के भी हृदय में प्राण संचार करनेवाले, सोये हुए लोगों को भी जगानेवाले और धीरुओं के हृदय में वीरता को भरकर बढ़ा देनेवाले—

> सपत्न समिधमाहार्षं बृहते जातवेदसे—
> यथा त्वमग्ने समिधा समिध्यसे एवमहमायुषा
> यथा त्वं ब्रह्मवर्चसा प्रजया पशुभिर्जातवेदसेन समिध्से ।
> जीवपुत्रो ममाचार्यो मेधाव्यहमसन्वनिराकरिष्णु
> वर्चस्वी तेजस्वी ब्रह्मवर्चस्यन्नादो भूयासम् , स्वाहा ॥१॥

अनुवाद अग्नेऽसि वर्च में दाहि—

> आयुर्वा अग्नेऽस्यायुर्मे दाहि
> वर्चोदा अग्नेऽसि वर्चो मे देहि
> अग्ने यन्मे तन्वा ऊनं तन्वा आपृण ॥२॥
> मेधां मे देव सविता आदधातु
> मेधां मे देवी सरस्वती आदधातु
> मेधामश्विनौ देवावाधत्तां पुष्करस्रजौ ॥३॥

इत्यादि मन्त्रों को एक साथ और एक स्वर में पढ़ कर परम पवित्र गन्ध की आहुति देते हुए प्रार्थना करते हैं—"भगवन् लोकलोचन सूर्य, जगत् के अन्धकार को दूर करनेवाली आपकी अनन्त ज्योति में बड़ी उत्कट भावना से हमने समिध का आधान किया है। जिस प्रकार आप समिध से दीप्यमान हो रहे हो उसी प्रकार, आयु, वीरता-शक्ति, उज्ज्वल ज्योति, प्रजा, पशु और ब्रह्मज्योति से मुझे भी दीप्त कर दो, हमारे आचार्य जीवितपुत्र हों, हम मेधावी, दूसरों का अपमान या कष्ट न पहुँचाने हुए भी, यशस्वी, तेजस्वी, ब्रह्मवर्चसी और सारी उत्तम संपत्तियों के भोक्ता बनें ॥१॥ आये आपन देव और विज्ञान पुकार कर कहते हैं, आप ही प्राणिमात्र की रक्षा करते हो, अतः मेरी भी रक्षा करो। आप ही आयु और ओज को देते हो, अतः मुझे भी दीर्घायु और ओजस्वी बना दो। मैं नहीं समझता कि मेरी शरीर और आत्मा में किस शक्ति का हास हो रहा है, पर आप अन्तर्यामी हो इसलिए जिस शक्ति का हास हो रहा हो, या जिस शक्ति का आविर्भाव हो न हुआ हो उसे सुप्त और जागृत कर दो ॥२॥ संसार

को ज्ञानवाले भगवान् सच्चिदेव हमारी धारणा-शक्ति को जगा दें। भगवती शारदा हमें सुबुद्धि दें। कमलों की माला से अलंकृत भगवान् अश्विनीकुमार हमें विचार-शक्ति का प्रदान करें।

इस प्रकार १२—२४—३६ या ४८ वर्ष के ब्रह्मचर्याश्रम से, जिसमें न तो सिनेमा, टिमी, गायन या सार्टिफिकेट नहीं, उस शक्ति, उस तेज, उस महिमा, उस सर्वोपबल, महाबल, ज्ञानबल और उस गाम्भीर्य या जगत्विजयिनी गदा का लेकर निकलते थे जिससे सूर्य की भी प्रतिभा हमारे सामने मन्द हो जाती थी। बड़ी बड़ी साम्राज्य-शक्तियाँ भी हमारे पैरों पड़ती थीं। सब साधु भी हृदय से हमारा अभिनन्दन करते थे। तब हम—

एतद्देशप्रसूतस्य सकाशादग्रजन्मनः।
स्वं स्वं चरित्रं शिक्षेरन् पृथिव्यां सर्वमानवाः॥

के अनुसार जगत् के गुरु बनते थे। और अपने बनाये हुए ज्ञान-सूत्रों में जगत् को नाचते थे। हम स्वतन्त्र थे, हमारी आत्मा, बुद्धि, कला कौशल, बल-पौरुष और चरित्र—सभी उज्ज्वल, संस्कृत और स्वतन्त्र बनाव जात थे। विज्ञान और विवेक का सूर्य हमारे सकल कला से हृदय प्राप्त कराता था। कुम्भी धान्य होते हुए भी अलोलुप बनते थे। हमें अपनी आत्मा पर विश्वास होता था, अतः समाज भी हमारा विश्वास करता था। हम धीर थे, दीर्घायु थे, यमराज की भी परवाह नहीं करते थे। हम काशी और लम्पटों को शिक्षा न देकर गृहस्थ बनने पर भी ब्रह्मचर्य के रक्षण का पूर्ण ध्यान रखते थे।

स्त्रियों के संस्कार—हमारे यहाँ स्त्रियों के भी संस्कार होते थे, वे भी ब्रह्मचारियों के समान गुरु गृह में वेदों तथा अन्य वेदयुक्त शास्त्रों की शिक्षायें प्राप्त करती थीं। जैसा कि स्मृतिकारों ने कहा है—हारीत—"द्विविधा स्त्रियो ब्रह्मवादिन्य सद्योवध्याश्च। तत्र ब्रह्मवादिनीनामुपनयनमग्नीन्धनं वेदाध्ययनं स्वगृहे च भिक्षाचर्येति। सद्योवध्वास्तूपस्थिते विवाहे कथञ्चिदुपनयनमात्रं कृत्वा विवाहः कार्यः।" इति

यमोऽपि—

पुराकल्पे तु नारीणां मौञ्जीबन्धनमिष्यते।
अध्यापनञ्च वेदानां सावित्रीवचनं तथा॥

पिता पितुव्यो भ्राता वा नैनामध्यापयेत्परः ।
स्वगृहे चैव कन्यायाः भैक्षचर्या विधीयते ॥
वर्जयेदजिनं चीरं जटाधारणमेव वा ॥

याज्ञवल्क्य ने भी स्त्रियों को ब्रह्मचारिणी बतलाया है—

प्राग्भूता ब्रह्मचारिण्यस्तुल्यवत् जयेत् स्त्रीणां। इदन्नन्यवर्णेषु ।

उपनिषदों में भी जनक की सभा में गार्गी की अध्यक्षता में ऋषियों के शास्त्रार्थ की चर्चा आती है। ऋग्वेद में कितने ही सूक्तों की द्रष्टा स्त्रियाँ भी मिलती हैं। ऋषियों के समान वेद भगवान् का आविर्भाव इनसे भी हुआ है। उत्तररामचरित में भवभूति ने भी आत्रेयी के वेदान्ताध्ययन की चर्चा की है—

"अस्मिन्नगस्त्यतनुजा यदेशे सूर्यस्य तद्गमयितुं विधिना यतन्ते
तेभ्यः प्रधिगतु निजमन्त्रविद्यां दक्षिणापथविधिं पर्यटामि ॥"

कालिदास ने भी इन्दुमती के स्वयंवर में उपस्थित अनेक राजकुमारों का सुनन्दा के मुख से वर्णन कराते हुए स्त्री शिक्षा का पूर्ण परिचय दिया है।

अभिज्ञानशाकुन्तल में भी शकुन्तला के आश्रमपरिचर्या आदि का वर्णन बड़े ही उत्तम ढंग से किया गया है। इस प्रकार वेदों और पुराणों में सैकड़ों उदाहरण मिलते हैं जिनसे स्पष्ट प्रतीत होता है कि स्त्रियाँ भी गुरुओं के आश्रम में रह कर, पूर्ण शिक्षित, आत्मावलम्बिनी, ब्रह्मचारिणी होकर गार्हस्थ्य-पद्धति आदि अनेक कलाओं में निपुण हो जाती थीं। उस और ब्राह्मण्य को तो वे (ब्रह्मचर्य का रक्षा से) मानों निधि बन जाती थीं। इनका चरित्र परम उज्ज्वल होता था, जिसका वर्णन करना केवल वाल्मीकि को ही आता है। बड़ी कारण था कि एक अज्ञातवास, वनवास से क्लेश, निरुत्साह, विलास से विमुख-सी, भारतीय अबला के कीर्ति-पटल पर रावण का अनुचित अत्याचार एक भी काला दाग न लगा सकी। क्या किसी अन्यान्य की कोई भी तुलना भारतवती सीतादेवी को रावण करने का साहस कर सकती है?

विवाह—अनन्तर युवक और अभिषेक की फिर परिचर्या से समावृत्त होकर जिन माता पिता ने बारह (और सन्तानवाले) बनने की प्रबल

उत्कण्ठा से न जाने कितने कष्ट और यातनाएं सहकर समय संचय पर अपूर्व सत्य का ज्ञान अनायास जानुनाशा के उपदेश आदि अनेक सरकारों से हमें गुरुकुल का अधिकारी बनाया था, जो कि हमें एक क्षण भी आँखों की ओट नहीं रखना चाहते थे, जो हमारी माँग पूरी किये बिना कभी भी सन्तुष्ट नहीं होते थे, जो कि अपने देश और समाज के लाख बड़ी बड़ी आशाएँ लगाये हमारी प्रतीक्षा कर रहे थे उनके चरणों में जा उपस्थित होते थे, और जो आश्रमपरिचर्या की परिपाटी हमें प्राप्त जो ठीक उसी रूप में "वाङ्मनोवेदो मम, चिन्मनो मम, आचार्यदेवो मम, अतिथिदेवो मम" इत्यादि के अनुसार उनकी अनुचित शुश्रूषा करते हुए उनकी आज्ञा और अनुमति से वेद की परम्परा और समाज को सुदृढ़ और सुसंघटित रूप में आगे बढ़ाने तथा अपने और पितरों के उद्धार के लिए विवाहित होना पड़ता था।

विवाह मानव-जीवन में एक बड़े महत्त्व का संस्कार है, क्योंकि मानो संसार का उत्थान और पतन दोनों ही इसी के ऊपर निर्भर हैं। संसार की सभी जातियाँ इसके विषय में बड़ी सावधानी रखती हैं। उन्हें विवेक और विचार के साथ इसके नियमों का पालन बाध्य होकर करना पड़ता है।

वेद, सूत्र और स्मृतियों का प्रामाण्य—यह बात प्रायः निर्विवाद है कि जिस समय दूसरी जातियाँ सभ्यता का स्वप्न देख रही थीं उससे भी बहुत पहले के हम लोग हैं, इनके जीते जागते दृष्टान्त हमारे वेद हैं। इनके विषय में बड़े बड़े ऐतिहासिक तत्त्ववेत्ताओं ने सिर टकराया पर वास्तविक फल न मिला। किसी का कहना है कि ये ४ सहस्र वर्षों के पूर्व के हैं, तो किसी का मत है कि ये ८ हजार वर्षों के भी पूर्व के हैं। कुछ लोग इन्हें अनादि सिद्ध करते हैं, तो दूसरे इन्हें ईश्वरीय ज्ञान बतलाते हुए अपौरुषेय भी मानते हैं। मेरी राय में चाहे ये लेख के रूप में रखे हों न रहे हों पर दुनिया की सभी पुस्तकों से पुराने हैं। इनके एक एक अक्षरों में विज्ञान कूट कूट कर भर गया है। इनकी एक भी बात ऐसी नहीं है जिसकी असत्यता सिद्ध करने के लिए कोई एक भी प्रमाण उपस्थित कर सके, क्योंकि किसी भी बात की असत्यता तब सिद्ध हो सकती है, जब उस बात का बाधक उपस्थित किया जाय। वेदों की बातों में बाधक उपस्थित करना

मनुष्य की बुद्धि से बाहर की बात है। उदाहरण के लिए "अग्निहोत्र से स्वर्गप्राप्ति होती है" इसका बाधक तभी हो सकता है जब अग्निहोत्र करनेवाला मृत्यु के अनन्तर लौट कर आवे और सिद्ध करके दिखला दे कि उसे स्वर्ग नहीं मिला। पर यह असंभव है। मेरा तो विश्वास इतना मजबूत है कि संसार के सभी विज्ञान वेदों में भरे पड़े हैं। मैं हमारे लिए कल्पवृक्ष हैं। मैं भी संसार के पथ-प्रदर्शक हैं, इनसे अधिक मनुष्य कभी सोच नहीं सकता है। आचार्य शंकराचार्य ने भी "शास्त्रयोनित्वात्" इस सूत्र की व्याख्या करते हुए लिखा है "यद्वा ऋग्वेदादि शास्त्रमनेकविद्यास्थानोपबृंहितं प्रदीपवत्सर्वार्थावद्योतिनि सर्वज्ञकल्पं इत्यादि" अनेक विद्याओं के स्थानभूत, प्रदीप के समान सकल पदार्थों को बतलानेवाले, सर्वज्ञ के समान वेद हैं। इनका बनाना सर्वज्ञ के अतिरिक्त किसी को संभव ही नहीं। आश्चर्य यह है कि कई सहस्र वर्ष पूर्व जब महर्षियों के हृदय में वेदों का आविर्भाव हो रहा था, उसी समय वेदों के समान संस्कारों के सूत्र-नियम रूप से आविर्भूत हुए हैं। इन सूत्रों की एक एक मात्राओं में बड़े बड़े विज्ञान भरे पड़े हैं, जिनका समझना भी आजकल के मनुष्यों का कठिन हो रहा है। इतिहास की दृष्टि से देखने से मालूम पड़ता है कि इनके विकास में जितने ही विघ्न पहले जोरों से चालू थे, बाद समाज की दुर्बलता देखकर या अन्य किसी कारण से उनके विषय में स्वतन्त्रता दे दी गई। कुछ दिनों के बाद उनका नाम-निशान न रहा, बल्कि उनके पालन करनेवाले पाखण्डी समझे जाने लगे। कुछ नियम समाज को सुधारने के लिए नये भी बनाये गये, पर वास्तविक जो हित का बातें थीं वह किसी न किसी रूप में आज तक हमारे समाज और पोथियों में प्रचलित हैं। उदाहरण के लिए एक अनुपर्क-व्यवस्था को ले लें—जो सुधारक पुराने हैं बनने या ब्राह्मण-कर्मों में यज्ञोपवीत के ऊपर पूर्ण जोर दिया गया है। बाद के सूत्रों में यह बहुत हल्का के ऊपर छोड़ दी गई। आजकल की दृष्टि से इसकी चर्चा में भी महापाप समझी जाती है। इसी प्रकार दीर्घ काल का ब्रह्मचर्य, अश्वमेध, स्त्रियों को वेदाध्ययन, मनुष्य-माता आदि भी अब हमारे लिए नहीं रहे। इसका मतलब यह है कि जब तक हम पराधीन न थे, आत्मा हमारी तपोबल से संस्कृत और स्वतन्त्र थी, उस पर हम विश्वास रखते थे। किसी भी वस्तु का अस्तित्व और

नालिन्य पर अपनी बुद्धि को टकराये बिना मानने को तैयार न थे, उस हालत में हम चाहे ऋषियों के जमाने पर पर अपनी आत्मा के बल पर जो कुछ भी करना चाहते थे कर बैठते थे। वह समाज के लिए हित ही होता था और समाज शिरस्त। उसका सम्मान करता था। तब हम में तर्कवाद नहीं रहा, ब्रह्मचर्य को एक बड़े महत्व की चीज समझ कर श्रेष्ठ वर्ष तक उसकी सेवा करते थे। आज नाटक के पात्रों के समान सभी करामात चन्टे भर में दिखा देते हैं। अतः हमारी अवस्था दुर्बल होती है। हमें स्वयं इस पर विश्वास नहीं तो दूसरों पर कैसे हो सकता है? यही कारण है कि अब हमें पुरानी पोथियों के आधार पर ही चलना पड़ता है। यदि हम स्वतन्त्र कुछ विचार प्रकट करना चाहते हैं तो धर्म-शास्त्रों के खण्ड विद्वान, नास्तिक और वेद-निन्दक कह कर हमारी अवहेलना करते हैं। पर मनु भगवान् ने तो साफ कहा है "यस्तर्केणानुसंधत्ते स धर्मं वेद नेतरः" जो मनुष्य बिना तर्क के किसी पर विश्वास कर लेता है वह धर्म के स्वरूप को कभी नहीं समझ सकता। भगवान् वेदव्यास के बाद हमारे समाज में ऐतिहासिक दृष्टि का उच्छेद-सा हो गया है। इसी कारण से हमें इन कठिनाइयों का सामना करना पड़ता है। हम यह नहीं समझते कि किस समय किस बात का प्रचार था, परिवर्तन किस कारण से हुआ था। जो मिल गया उसी का हम हर हालत में उपयोग करना चाहते हैं। परन्तु यह सोचना चाहिए कि एक ही औषधि से समस्त व्याधियाँ कैसे नष्ट हो सकती हैं। बहुत दिनों से हमें यह अभ्यास हो गया है कि, अनेक जातियों को एक डण्डे में बन्द कर दें। अभी विरोधी बातों की मनमानी एकवाक्यता कर डालें, हम इसके विरोधी नहीं हैं। पर इनके साथ देश-काल की भी व्यवस्था करना चाहते हैं, जैसा हमारे आचार्यों ने बहुत स्थानों में किया भी है। प्रायः आचार्यों का सिद्धान्त है कि तुल्यबलवाले प्रमाणों के विरोध में दोनों ही बातें मानने योग्य होती हैं। स्मृतियों के साथ श्रुति के विरोध में श्रुति प्रबल है, उस स्थल में स्मृति अप्रमाण हो जाती है। सूत्र-भाष्य श्रुतियों की अपेक्षा तो अवश्य ही दुर्बल हैं। पर इतिहास की दृष्टि से स्मृतियों के मूल होने के कारण प्रचलित स्मृतियों की अपेक्षा इनका प्राधान्य अत्यधिक होना चाहिए। आज लोग ऐसा मानते भी हैं। मेरी राय में श्रुति से किसी प्रकार

भी जो अर्थ उपस्थित होता है, उसका भाव इधर-उधर के अनुष्ठानों से कभी भी नहीं हो सकता, क्योंकि वे उसकी मूलभूत हैं। इस संबंध में योगाभ्यासकों का मत उन्हें नहीं पसन्द आता। वे केवल विधिवाक्य को ही प्रमाण मानते हैं। अन्य समस्त ब्राह्मण और उपनिषद्-भाग को अर्थवाद जानकर स्वार्थ में प्रमाणशून्य मानते हैं, यही तक नहीं, उनका मत है कि समस्त रामायण, महाभारत और पुराण आदि अर्थवाद हैं, केवल राम के समान बर्ताव और रावण के समान व्यवहार न करने ही में तात्पर्य है। वस्तुतः न राम, रावण, युधिष्ठिर आदि हुए ही नहीं। परन्तु यह कहना उन्हीं को शोभा देता है। हम तो ऐसे कहने-वालों को आदर की दृष्टि से नहीं देख सकते। ऐसे लोगों का खण्डन वेदान्त, न्याय आदि शास्त्रों में बड़े ही अच्छे ढंग से किया गया है। अस्तु, इसे हम यहीं समाप्त करते हैं। इतना अवश्य ध्यान में रखना चाहिए कि श्रुति का स्मृति से किसी प्रकार से भी बाध नहीं हो सकता। स्मृतियों में विरोध होने पर देश-काल के अनुसार दोनों ही प्रमाण हो सकते हैं। सूत्रों के साथ स्मृतियों के विरोध होने पर सूत्रों का ही विशेष आदर है। यदि ये भी स्मृतियों ही की कोटि में रखे जायँ तो भी सूत्रों के अनु-सार समाज का यदि हित हो सकता है तो अवश्य आजकल उन्हीं का प्रचार में लाना आवश्यक है।

विवाह का अधिकार—पहले यह बात लिखी जा चुकी है कि गुरुकुल से (कम से कम १२ वर्ष के ब्रह्मचर्य से) समावृत्त होकर जानी (२० वर्ष की अवस्था में) गल, विद्या, ब्रह्मचर्य, तपोबल, नीतिबल आदि से परिपूर्ण होकर जब गृहस्थाश्रम में अनुष्ठा प्रविष्ट होता था तभी उसे विवाह का अधिकार प्राप्त होता था। स्त्रियाँ भी गुरुगृह में यथा-संभव तक उपयुक्त शिक्षाओं के साथ साथ गार्हस्थ्य पद्धति से निपुण होती थीं, रूप और लावण्य की निधि बन जाती थीं; ऐसी अवस्था में राम और जानकी, अर्जुन और द्रौपदी, कृष्ण और रुक्मिणी, नल और दमयन्ती के स्वयंवर होते थे। पुराणों में जाय: जहाँ विवाह की चर्चा मिलती है, वहाँ स्वयंवर ही बतलाया गया है। जानी पुरुष और स्त्री की अवस्था परिपक्व हो जाने पर ही विवाह होता था। ऐसी अवस्था में आप सोच सकते हैं कि उस युग में विधवायें या बन्धायें कहाँ रह सकती थीं। विधुरों की वृद्धु और बूढ़ा-दशा क्यों होगी। इसी

चित्र को शान्त करना में रखकर वाल्मीकि ने रामायण में राम-राज्य का विवरण कराते हुए लिखा है—

"भार्याश्चाविधवा नित्यं भविष्यन्ति पतिव्रताः ।
न पुत्रवदं केचिद्दक्ष्यन्ति पुरुषाः क्वचित् ॥

उस अवस्था में बुरे वह भी उच्च स्थान के हो जाते थे, बुरा लाभ भी हमारे लिए अच्छा हो जाता था । इसी अभिप्राय से जैमिनि ने लिखा है—

स्नात्वा मातापितरौ परिचरेत् तदधीनः स्यात् ।
दारान्मनुज्ञातो जायां विन्देत् अनातिकाम् ।

स्नातक होने के अनन्तर माता-पिता का परिचर्या करते हुए उनकी आधीनता में और उनकी अनुमति से पाणिग्रहण करना । भारद्वाज ने विवाह के उद्देश्य और अधिकार में यों लिखा है—

चत्वारि विवाहकारणानि, बिल रूपं प्रज्ञा बान्धवमिति, तत्रेति चेत्सर्वेषि न शक्नुयात्, विद्यामुदस्येत्तत रूपं प्रज्ञायां च तु बान्धवे च विवदन्ते, बान्धवमुदस्येदित्येके आहुः, कुलीन हि क सेवाया ।

अनैतदपरं न सत्विवाहान्योऽपुत्रेभ्य उच्यते, प्रजनार्थो हि स्त्रियो देवानां । न वाऽपुत्रं सलोकतामाप्नोतीति, तस्मात् जायां रक्षति ।

परस्य अनोऽपुरुषते चक्षुश्च प्रतिपद्यते ।
तां विद्यात्पुण्यलक्षणां किं ज्ञातेन करिष्यति ॥

विवाह के चार कारण होते हैं, धन, रूप, विद्या, और कुल । यदि वे सभी न मिल सकें तो धन को छोड़ना, बाद रूप को । विद्या और कुल के विषय में आचार्यों का मत भेद है । आचार्य कुल को विवाह का मुख्य कारण विद्या और दूसरे लोग कुल को मानते हैं । पर सिद्धान्त तो यह है कि कुल अच्छा न भी मिले पर विद्वान् वर मिल जाय तो विवाह हो सकता है । अपुत्र (विवाहहीन) के साथ स्त्रियों का संवास (आनन्द के साथ स्थिति) कैसे हो सकता है ? दूसरी बात यह भी है, कि स्त्री अन्य प्रयोजन के लिए नहीं संगृहीत की जाती । (अन्य प्रयोजन दूसरे उपायों से भी सिद्ध हो सकते हैं,) सन्तान ही इसका मुख्य फल है, अतः जो पुरुष सन्तानोत्पत्ति के समर्थ हो वही स्त्री का पाणिग्रहण कर सकता है (न कि बालक या वृद्ध) जिसमें प्रशस्त लोगों सम्पन्न वस्तु हों । इस प्रकार पुरुष की वाञ्छा का परिचय देते हुए स्त्री को

विवाह-योग्यता के विषय में लिखा है, "जिसको देखते ही पुरुष का मन आनन्द में आप्लावित होने लग जाय, आँखें विकसित हो जावें, उसी को पुण्य लक्षणों का आगार समझना चाहिए; दूसरी परीक्षायें सर्वथा निष्फल हैं।" इन बातों का समर्थन भावप्रकाश और मनु ने भी किया है। विवाह के प्रकरण में आये हुए वेद-मन्त्र भी इस बात को पुष्ट करते हैं।

"अघोरचक्षुरपतिघ्न्येधि शिवा पशुभ्य सुमना प्रजायै॥
वीरसूर्देवकामा स्योना शं नो भव द्विपदे शं चतुष्पदे॥"

वेदों में आनन्द बरसाती हुई पति के प्रतिकूल न चलनेवाली, पशुओं और प्रजाओं के लिए कल्याणकारी, प्राणी के लिए सुख या वज्र के समान आचरण करनेवाली, आयुष्मान और वीर सन्तानों को उत्पन्न करनेवाली तथा कीर्तिमयी का फैलाती हुई जो तुम हो उसे गृहस्वामिनी बनाने के लिए देवताओं ने तुझे दिया है।

कालिदास ने भी रघुकुल का वर्णन करते हुए रघुवंश के प्रथम सर्ग में लिखा है "सन्तत्यै गृहमेधिनां" अक्षुण्ण शूर-वीर परम्परा को ही चलाने के लिए रघुवंशी लोग विवाह करते थे।

इससे स्पष्ट हो गया कि हमारे पूर्व-पुरुषों का, विवाह के विषय में अपनी स्वयं अपने से भी अधिक ओजस्वी, प्रतापी, शूर-वीर सन्तानों को उत्पन्न करना ही था।

अब हम शास्त्रों के अनुसार विवाह की परिभाषा इस प्रकार से कर सकते हैं—'बच्चा सन्तान के उद्देश्य से उचित समय पर कुछ आवश्यक विधि और नियमों के साथ स्त्री और पुरुष के सम्बन्ध-विशेष को विवाह कहते हैं।"

सवर्ण या असवर्ण विवाह—वेदों में विराट् पुरुष का वर्णन करते हुए—

"ब्राह्मणोऽस्य मुखमासीद्बाहूराजन्य कृत
ऊरू तदस्य यद्वैश्य पद्भ्यां शूद्रो अजायत"

कहा है ब्राह्मण, क्षत्रिय, वैश्य और शूद्र को—मुख, बाहु, जङ्घा और पैर बतलाया गया है। इससे सिद्ध है कि वर्ण-व्यवस्था वैदिककाल

या सृष्टि के प्रारम्भ से, ब्राह्मण, क्षत्रिय वैश्य और शूद्र इन चार विभागों में विभक्त है। यह बात तो सिद्धप्राय है कि इनके गुण और कर्म भी (जैसा भगवद्गीता और अन्यादि में लिखे हैं) अनादिकाल से ही विभक्त हैं। पुनः एक पदार्थ में अन्तर होने से उनकी शक्तियाँ भिन्न हो जाती हैं; तो जहाँ ब्राह्मण, क्षत्रिय, वैश्य, शूद्र और स्त्रियों के आचार विचार, रहन-सहन, आहार-विहार आदि सभी भिन्न हैं, वहाँ उनकी शक्तियों का अवश्य ही भिन्न मानना पड़ेगा। वेद, पुराण और स्मृतियों को देखने से इसमें भी सामञ्जस्य प्रतीत होता है। जैसे ब्राह्मण, क्षत्रिय, वैश्य, शूद्र में पूर्व पूर्व के अधिक शक्तिवाले होते हैं। यह तो निर्विवाद है कि पुरुष-शक्ति की अपेक्षा स्त्रियों की शक्ति दुर्बल होती है। किसी अंश में भले ही यह सिद्धान्त दुर्बल हो पर अधिकांश में ठीक है। ऐसी अवस्था में यहाँ हमें ऐसे-कलत्रवालों से मिलना होगी। देखा गया है कि दो वृत्तों की कोमल शक्तियों या दो वृत्तों के बीजों को एक साथ सम्पुटित कर मिट्टी में गाड़ देने से एक विलक्षण शक्तिशाली कोंपल हो के भिन्न, दोनों ही के गुणों से संपृक्त, नई चारु बेल हो जाती है, कभी दोनों ही से उत्कृष्ट, कभी हीन, कभी माध्यमिक अवस्था भी प्राप्त होती है। इससे हम अनुमान कर सकते हैं कि दोनों शक्तियों के संग होने पर उनके संयोग से अवश्य ही (१ + १ = २) का हिसाब होगा। एक शक्ति को प्रबल होने पर, दूसरी को भी हतबुद्ध रहते और अपनी तरफ कुछ झुकाव रहने पर अवश्य ही माध्यमिक अवस्था प्राप्त होगी, यदि किसी कारणवश एक शक्ति अप्रबुद्ध हो जाय तो दुर्बल शक्ति से दुर्बलतर फल अवश्यम्भावी है। बस ठीक इसी हिसाब से शास्त्रों में सन्तान जाति स्त्री के साथ सन्तान जाति पुरुष का सम्बन्ध बताया गया है। इस संबन्ध से जो सन्तान होगी वह अवश्य उत्कृष्ट और आनन्दी होगी। ऊँचे जाति के पुरुष से नीच जाति की स्त्री में जो सन्तान उत्पन्न होगी वह शास्त्रों में मध्यम श्रेणी की कही गई है। पर ऊँची जाति की स्त्री में नीच जाति के पुरुष से जो सन्तति उत्पन्न होगी वह पुरुष की जाति से भी अधम मानी गई है। इसी लिए शास्त्रों में ऐसे संबन्ध की शीघ्र ही निन्दा की गई है। और ऐसे संबन्ध करनेवालों को तथा इन सम्बन्धों से उत्पन्न सन्तानों को बड़े बड़े दण्ड बतलाये गए हैं। राजशक्ति या ऐसे सम्बन्धों को

रोकने में पूर्ण सहयोग देती थी। इन बातों का उल्लेख बौधायन धर्म-सूत्र और मनुस्मृति में पूर्णरूप से किया गया है। इसी कारण से मनु भगवान सर्वत्र विवाह का सम्मान करते हुए, अभाव में अनुलोम विवाह को भी अनुमति देते हैं। किन्तु प्रतिलोम विवाह के ऊपर सर्वथा असंतोष ही प्रकट करते हैं।

असगोत्र विवाह—आयुर्वेद के आचार्य तथा संस्कार सूत्रकारों की सम्मति है कि संबन्ध के समय वैदिक विधि और उत्तम हविष्य भोजनादि से पूर्ण सन्तुष्ट और प्रसन्न होकर मनोहर वस्त्राभूषणों से स्त्री और पुरुष दोनों ऐसे अलंकृत हों कि एक दूसरे को देखते ही तुरत ही मोहे और उन्हें ज्ञात पड़े कि गोद में खेल करते हुए राम या कृष्ण के समान छोटे से पुत्ररत्न को छोड़ कर दुनिया में और कोई पदार्थ है ही नहीं। इस पवित्र भावना से संबन्ध होने पर माता-पिता की सकल शक्तियाँ मिल-कर एक अद्भुत शक्ति का विकास करती हैं। ऐसे समय यदि किसी प्रकार की चिन्ता या भय उपस्थित हुआ हो तो जैसे शीशे के चित्र में लीक उस चिन्ता और भीरुता को अवश्य पढ़ जाता है वैसी वस्तु गर्भ के लिए चिन्तित और भीरु सन्तान उत्पन्न होती है। यही चित्र ज्वाल खाण्डव में महाभारत में धृतराष्ट्र और पाण्डु को उत्पन्न करते समय खींच रक्खा है। आप देखना चाहते हों तो महाभारत के आदि-पर्व में देख सकते हैं। इसी लिए व्यभिचार का शास्त्रकारों ने जोरों से विरोध किया है। क्योंकि व्यभिचारी के हृदय से अवश्य ही कुछ न कुछ भय चला जाता है।

यहाँ इतना और भी ध्यान में रखना आवश्यक है कि एक अत्यन्त लावण्यमयी युवती को देखकर जो भावनायें उसके पति के चित्त-करण में नवजलकणवत् में सौदामिनी के समान उठती हैं वह उसके पिता, भ्राता और पुत्र के हृदय में कभी नहीं उठ सकतीं यदि किसी कारणवश अनुचित प्रवृत्ति हो भी जाय तो वहाँ आनन्द का आभास ही आभास प्राप्त आवेगा। इसी कारण कालिदास लोग अनुचित प्रवृत्ति के शृंगाररस को कविताओं से भी रसाभास ही मानते हैं। जहाँ उदात्त सामाजिक को भी रस नहीं मिलता वहाँ ऐसे पात्रों को क्या मिलेगा यह वही समझ सकते हैं। जो तो कैसे भी बात को किसी प्रकार से किसी क्षेत्र में फेंक देने से समय व्यतित होने पर

किसी न किसी बहन से पीछे अवश्य होंगे। पर वह बात न होगी जो होनी चाहिए। इसी विषय के आधार पर मुसलमान, ईसाई एवं अन्य जातियों में भी भाई बहिन का ऐसा सम्बन्ध अनुचित समझा जाता है। पर हमारे आचार्य जहाँ तक मातृ-पितृ के सम्बन्धों की बात चलती है वहाँ तक भाई बहिन का नाता मानते हैं। अतः जिस नाते के कारण भाई का बहन के साथ सम्बन्ध नहीं हो सकता उसी कारण जहाँ तक वह नाता रहता है वहाँ तक इसे सम्बन्ध शास्त्र और लोक में गर्हित समझे जाते हैं। अनुर्थियों की मौखिपरम्परा बराबर चलती आती है पर साधारण पुरुष की लाल और स्त्रियों की बीच पीढ़ी तक यह परम्परा जारी रहती है। यह आयुर्वेद के आचार्यों का भी मत है। इस विषय में समस्त सूत्रकार धर्मसूत्रकार और बहुतेरे स्मृतिकारों की प्रायः एक राय है। पर साधारणतया इन सभी प्रमाणों पर धूल झोंकते हुए पराशरमाधव में कुछ इधर उधर के अनुष्टुपों के आधार पर मामा की कन्या के साथ विवाह की व्यवस्था दे डाली है। और दक्षिण देश में विशेषकर वहाँ के नाम्बूरी में मुसलमान और ईसाइयों के समान वह लेबन्ध अभी तक प्रचलित समझा जाता है। अरी समझ में माधव ने यहाँ बड़ी भारी भूल की है—

प्रमाण

जैमिनिसूत्र—जामयो विन्देव नविद्यते। समानजातीयासमानगोत्रा मातृसपिण्डा व्यायसा कनीयसीम्।

गोभिल—(वाराह कुर्वीत् इत्यनुकल्प) असगोत्राम् मातृसपिण्डाम्।

गौतम-धर्मसूत्र—असमानप्रवरैर्विवाह ऊर्ध्वं तेन मातृपितृबन्धुभ्यो वीजिनश्च मातृबन्धुभ्य पञ्चमात्।

वाराहगृह्यसूत्र—असमानप्रवरैर्विवाह ऊर्ध्वं सप्तमात् पितृबन्धुभ्य-पञ्चमान्मातृबन्धुभ्यो वीजिनश्च।

मनवान् मनुः—गुरुमातृसुता स्वाला समावृत्तो प्रवाजिषि।
वहुद्वेष द्विजा भार्यां भवतीं लक्षणान्विताम्॥

असपिण्डा च या मातुरसगोत्रा च या पितुः ।
सा प्रशस्ता द्विजातीनां दारकर्मणि मैथुने ॥

शरीरस्थान द्विसोदाध्याय में भगवान् चरक की भी अनुल्यगोत्रा के ही साथ विवाह की सम्मति मिलती है।

पुरुष की अपेक्षा स्त्री की अवस्था—इतना यहाँ और भी ध्यान में रखना आवश्यक है कि स्त्री की अवस्था पुरुष की अपेक्षा न्यून होनी चाहिए, क्योंकि पहले ही कहा जा चुका है कि जो शक्ति प्रबल होगी वह दुर्बल को आसानी परास्त कर देगी। अतः विवाह के आधार पर यदि स्त्री पुरुष की अपेक्षा प्रबल हुई तो अपनी शक्ति के अनुसार कन्याओं को ही उत्पन्न कर सकती है। अतः रहने पर सन्तान क्लीव होगी। पुरुष के प्रबल होने पर पुत्र उत्पन्न होते हैं—

भगवान् चरक ने शा० द्वि० अ० में लिखा है—

रक्तेन कन्यामधिकेन पुत्रं शुक्रेण तेन द्विविधीकृतेन ।
नीलाद् सवर्णादुभयात्मकेन्द्रात् स्त्रीपुंसलिंगी भवति द्विरेता ॥

इत्यादि। इसी लिए जैमिनि ने भी (कर्मपरीक्षा) विशेषता दिया है।

शास्त्रों में विवाह के आठ भेद बतलाये गये हैं—ब्राह्म, दैव, आर्ष, प्राजापत्य, आसुर, गान्धर्व, राक्षस और पैशाच। अलंकृत करके पिता यदि कन्यादान व देवे तो ब्राह्म। यज्ञ के समय आये हुए ऋत्विक् को प्रालंकार कन्या दान में देवे तो दैव। पिता यदि किसी योग्य पुरुष के साथ कन्या को गार्हस्थ धर्म के आचरण करने की आज्ञा दे तब प्राजापत्य। कुछ साधारण द्रव्य लेकर कन्या ही जाय तो आर्ष। माता-पिता की बिना अनुमति के स्त्री-पुरुष का सम्बन्ध हो जाय तो गान्धर्व। अधिक धन लेकर कन्या बेचना आसुर। सोई हुई या मत्त कन्या को हरण करने से पैशाच और कन्या के बान्धवों को जबरन मार देती हुई कन्या का आसुरता को राक्षस विवाह कहा जाता है। पूर्व के ४ उत्तम, बाद के २ अधम, अन्त के २ निकृष्ट और हेय कहे गये हैं।

पुराने जमाने में कन्यान्वेषण—आदि से लेकर सूत्रों के जमाने तक बहुधा वरपक्षवाले कन्या का अन्वेषण करते थे, पश्चात् कदाचित् कन्यापक्ष के लोग भी यत्न कर लिए जाने पर स्वयं दान किया करते थे।

विवाह के समय—विवाह के समय के विषय में आचार्यों का बड़ा मतभेद है, बौधायन और भारद्वाज का मत है "हर एक मास में विवाह हो सकता है।" आपस्तम्ब कहते हैं "आषाढ़, माघ और फाल्गुन को छोड़ हर एक मास उत्तम है।" कुछ आचार्य उत्तरायण को लेह समझते हैं। आधुनिक आचार्य माघ, फाल्गुन, वैशाख, ज्येष्ठ, आषाढ़ और श्रावणमास की अनुमति देते हैं। कौशिकसूत्र तो कार्तिक की पूर्णिमा से वैशाखी पूर्णिमा तक की अवधि बतलाता है। इस विषय में सिद्धान्त का स्थिर होना बड़ा ही दुश्किल है। भारद्वाज ने तो सबका खण्डन ही कर डाला है। अवधों के विषय में अवश्य ही आचार्यों का ध्यान है। बहुत से नक्षत्र सूत्रों में कहे गये हैं। लेकिन प्रचलित ज्योतिषग्रन्थों में ये निषिद्ध समझे जाते हैं। कुछ नक्षत्र जो सूत्रों में विवाह के लिए उपयुक्त नहीं समझे जाते उनका भी आजकल समावेश हो गया है। लग्न, पक्ष, वार और वेलों की चर्चा सूत्रों में कहीं भी नहीं मिलती है।

विवाहादि संस्कारों में हवन की महत्ता—पुराने जमाने में भारत में अग्निहोत्र की प्रथा घर घर में प्रचलित हो रही थी। शास्त्रों में अग्निहोत्र का अधिकार विवाह के अनन्तर सपत्नीक होने पर बतलाया गया है। द्विजों का ऐसा ही कोई अभागा घर रहा होगा, जहाँ अग्निहोत्र न होता रहा हो। यह कोई आवश्यक नहीं था कि पुरुष ही अग्निहोत्र करें। उनके किसी अन्य कार्यों में व्यापृत रहने पर या विदेश चले जाने पर इस कार्य का भार स्त्रियों को सौंपा जाता था। कुछ आचार्यों का तो मत है कि सायंकाल का अग्निहोत्र स्त्रियाँ ही करें। अग्निहोत्र का प्रारम्भ उसी अग्नि में होता था जिसे साक्षी रखकर स्त्री-पुरुष में दाम्पत्य स्थापित किया जाता था। गृह के सभी पुनीत कार्य कुछ न कुछ हवन के साथ इसी अग्नि में निष्पन्न होते थे। इसी लिए इस अग्नि को गृह्य भी कहते हैं। यह बात हिन्दू धर्म में और धर्मों की अपेक्षा विशेष थी कि इनके घरों में सायं और प्रातःकाल उज्ज्वल पवित्र भाव-परिपूर्ण हृदय में अद्भुत शक्ति, उत्साह, निर्भीकता, वीरता, कर्तव्यता, ओजस्विता और सच्चरित्रता के प्रवाह को बहानेवाली उन वेद-मन्त्रों के साथ नवल पवित्र गोघृत, दुग्ध एवं अन्य उपयुक्त और उत्तम पदार्थों

की आहुति से दीप्त ज्वालाओं, अजमान और इसके पूर्व उत्तर देशों के लिए भरत के द्वारा स्वर्ग के मार्ग को निष्कण्टक बनाने के भावना गृह, तथा प्राण को पवित्र और सुवासित करती हुई सम्पन्न देश के वायुमण्डल को पुनीत करती थी और दूषित होने से बचाती थी। यही कारण था कि पुराने जमाने में आजकल की तरह आकस्मिक व्याधियाँ हमें अपना आगार नहीं बना सकती थीं।

यह प्रायः देखा जाता है कि ऐसे या आषाढ़ या अन्य दिनों में जब अत्यधिक गर्मी पड़ती है अथवा किसी अन्य कारण से व्याकुल होकर पहाड़ों से दल के दल आसमान को रँगती हुई सूर्य के प्रतिबिम्ब को छिपाती हुई टिड्डियाँ नगर पड़ती हैं। ये जिन वृक्षों या वाटिकाओं में (खग कपालन्यायात्) पड़ जाती हैं उनके सारे रस को, चूस कर पंजरमात्र अवशिष्ट छोड़ जाती हैं ऐसे अवसरों पर बागों में अद्भुत लीला देख पड़ती है। विशिष्टों के समान कोई चीत्कार मचाता है, कोई दीन पीटता है, कोई ढोलों को, बेताल सुर के पीटता है, कुछ लोग वाटिकाओं को ही डण्डों से ठोकते हैं, कुछ बुद्धि रखनेवाले इधर-उधर से घास पत्ते वगैरह का इकट्ठे कर भयंकर धूम उत्पन्न कर देते हैं। इस प्रकार ईख वगैरह को बचाने के लिए अनेक उपाय किये जाते हैं इस तुमुल ध्वनि में धूम की कटुता से ऊब कर वास्तव में टिड्डियाँ भाग जाती हैं और फसल सकुशल बच जाती है।

आयुर्वेद के आचार्य और आजकल के डाक्टर अपस्मार आदि बहुतेरे ज्वर, बहुतेरे व्रण तथा अन्य व्यक्तियों की चिकित्सा धूम के द्वारा भी करते हैं उनसे परामर्श करने पर ज्ञात हुआ कि वायु के दूषित हो जाने पर बुरे कीटाणु उत्पन्न हो जाते हैं। ये इतने सूक्ष्म होते हैं कि उनका परिचय करना कठिन हो जाता है। ये अन्नों या मक्खियों के साथ साथ हवा में मिलकर मनुष्य के शरीर में प्रविष्ट हो जाते हैं और खटमलों की भाँति बहुत ही शीघ्र बड़ा कुटुम्ब बना लेते हैं एवं शरीर के रस और धातुओं को विकृत कर देते हैं। बाद इससे मनुष्य बीमार पड़ जाता है। उस मनुष्य के संसर्ग से और लोग भी इन बीमारियों के शिकार बन जाते हैं। इनकी चिकित्साओं में धूम की चिकित्सा भी प्रधान समझी जाती है। धूम की प्रथा को न सह कर ये भाग जाते या

नष्ट हो जाते हैं। मेरी समझ में इसी विज्ञान के आधार पर हमारे पूर्वजों ने पुण्यसंचय के साथ समय समय पर संस्कारों में एवं आहिक कर्मों में शुद्धातिशुद्ध मंत्रों के मूल से वैदिक, मानसिक, आध्यात्मिक और सामाजिक दोषों को दूर करने की प्रथा चलाई थी। पर यह बात अब जाती रही। अब तो केवल रस्म अदा करने के लिये कुछ संस्कारों में पुराने युग का खेल खेला जाता है।

मन्त्रों की उपयोगिता—मन्त्रों की उपयोगिता के बारे में अरह के अलावा इतना ही कहना इस पर्याप्त समझते हैं कि यदि एक अच्छा गायक अपने सुर-ताल को ठीक करके उत्तम और सामयिक पदों का गान करता हुआ सहृदयों के मन को तो क्या पशुपक्षियों तक का मुग्ध कर सकता है, तो अवश्य ही उत्तम वैदिक संस्कारों की क्रिया के परिष्कृत वेद-मन्त्रों का घोष देवताओं और उन अवसरों के अन्तःस्तल को पवित्र बना सकता है। इसलिए उपनिषदों में (तत्त्वमसिआदि) महामन्त्रों के बार बार के अभ्यास और मनन के द्वारा मोक्ष तक का मिलना बतलाया गया है और जपों का भी यही माहात्म्य है कि अनुष्ठान बार बार अपने ध्येय का ध्यान करते करते तद्रूप हो जाता है। वाचस्पति मिश्र ने भी इसी दृष्टि पर अभ्यास की उपयोगिता को शास्त्रों में सिद्ध किया है। इत्यलम्।

राजनारायण शर्मा

। श्री ।

'धर्ममीमांसा'

(धर्मस्य सम्यगनुसारिता स्वरूपनिरूपणा चेति विषयानुसारिणा निबन्धः ।)

"यज्ञा दानं तपोऽपि न त्यजुर्ते विशुद्धं परम् ।
मन्यानुकूलतेन धर्मोऽपि पावनकम् ॥१॥
रामाप्रसादेन मया निबन्ध-
स्वान्तःस्वभावेन विनिर्मितस्तु ।
प्रीत्यै च मूर्याद्विदुषां मनस्तु
सत्कार्यमेतेन तत: स लोके ॥२॥
सद्भावोत्कर्षसंपुष्टा वालिका पुस्तकी मया ।
भानु: धर्मं तमाश्रेतु वाक्चन्द्रदिवाकरौ" ॥३॥

धर्मस्य सम्यगनुसारिता स्वरूपनिरूपणा चेति प्रस्तुयते । यद्यपि तेषां वाक्यार्थबोध इति कारणमिति सर्वसम्मतम् । कुतो तावत्तो वाक्यं धर्मपदार्थ-स्वरूप समाप्त का च तदनुसारिता किम्रूप सम्बन्धरूप का च तन्निरूपणेत्यादीनां तत्तत्पदार्थविवेचनं क्रमप्राप्तं भारभ्यते । तत्र तावत्तो वाक्यं धर्मपदार्थ इत्यत्र मनुराह ।

"विद्वद्भिः सेवितः सद्भिर्नित्यमद्वेषरागिभिः ।
हृदयेनाभ्यनुज्ञातो यो धर्मस्तं निबोधत ॥१॥

(मनु० अ० द्वि० श्लोक १)

विश्वामित्रः—

"यस्यार्थे विषयार्थं तु संकल्पस्यागमेदिनः ।
स वर्णोऽपि विगर्हन्ति तमधर्मं प्रचक्षते ॥

(मनु० अ० सं० का० पृ० १३, पंक्ति १३)

इति धर्मसामान्यलक्षणम् मनुविश्वामित्राभ्यामुक्तम् तथा विशेषलाऽपि मनुरेव धर्मपदार्थमाह—

"धृतिः क्षमा दमोऽस्तेयं शौचमिन्द्रियनिग्रहः ।
धीर्विद्या सत्यमक्रोधो दशकं धर्मलक्षणम् ॥ इति

(मनु अ० ६ श्लोक ९२)

धृतिर्धैर्यम्, तस्य त्रैविध्यमाह भगवान् वासुदेवः आह

'धृत्या यया धारयते मनः प्राणेन्द्रियक्रियाः ।
योगेनाव्यभिचारिण्या धृतिः सा पार्थ सात्त्विकी ॥३३॥

"यया तु धर्मकामार्थान्धृत्या धारयतेऽर्जुन ।
प्रसङ्गेन फलाकाङ्क्षी धृतिः सा पार्थ राजसी ॥३४॥

यया स्वप्नं भयं शोकं विषादं मदमेव च ।
न विमुञ्चति दुर्मेधा धृतिः सा पार्थ तामसी ॥३५॥

(गी० अ० १८ श्लोक ३३ ३४ ३५)

क्षमाऽपीति चित्तस्वाविकारः, यथा । अन्तःकरणस्यमा दमः । बाह्ये-बाह्यकृत्ताकारः । शौचं बाह्याभ्यन्तरम् । इन्द्रियनिग्रहो विषिद्धेभ्य इन्द्रियाणां निवारणम् । धीरकार्यनिवृत्तिः । विद्या आत्मज्ञानम् । सत्यं यथार्थं वचनम् तच्च प्रियमेव वेदितव्यम् । तथा च मनुः—

'सत्यं ब्रूयात्प्रियं ब्रूयान्न ब्रूयात्सत्यमप्रियम् ।
प्रियं च नानृतं ब्रूयादेष धर्मः सनातनः ॥ इति ॥ १॥

(मनु अ० ४ श्लोक १३८)

अक्रोधः क्रोधराहित्यम् । एतद्दशकं धर्मविद्योपलक्षणमित्यपरे ॥ व्यासोऽपि विशिष्टं धर्मलक्षणमाह—

'सत्यं दमस्तपः शौचं सन्तोषो ह्रीः क्षमार्जवम् ।
ज्ञानं शमो दया ध्यानमेष धर्मः सनातनः ॥१॥

(स्कन्द० अ० खं० का० पु० ३४, श्लोक १३

अत्रोपात्तानां सत्यादिगुणानां विशेषधर्मनिमित्तानां सत्यं व्याख्यातं तत्र लक्षयन्नाह—

'सत्यं भूतहितं प्रोक्तं भवतो दमनं दमः ।
तपः स्वकर्मवर्णित्वं शौचं सकलकर्मनम् ॥१॥

सन्त्यागो विषयस्यास्य द्वीन्द्रियार्थनिवर्तनम् ।
सुखा दुःखमुपेक्षा च तुल्यार्थेव समचित्तता ॥२॥
ज्ञानं तत्त्वार्थसम्बोधः शमः चित्तप्रशान्तता ।
दयाभूतहितैषित्वं क्षमा तितिक्षा तथा ॥३॥

(स्मृ० चं० सं० का० पृ० १४, पंक्ति १६)

अर्थान्तराण्यपि विविधानि व्याख्यातवान्—

"दानं यज्ञः तपो पूजा वेदाध्ययनमार्जवम् ।
एष धर्मः परो ज्ञेयः फलवान्प्रेत्य चेह च ॥१॥
नोपेक्षेतात्मनि हितं सर्वेषां तत्त्वावलोकनम् ।
ज्ञेयं यत्तत्त्वतो ज्ञात्वा कपिलः प्राह तत्त्ववित् ॥२॥
सर्वेषां समदर्शित्वं निर्ममत्वमनैषिता ।
ज्ञेयः परः मनुष्याणां प्राह पञ्चशिखो मुनिः" ॥३॥

(स्मृ० चं० सं० का० पृ० १४ पंक्ति ३)

पुनः धर्मस्य विशेषतः तद्दर्शिनस्य वर्णाश्रमादिभेदेन विशेषाकारं षड्विधं सुमन्तुराह—

"वर्णानामेकमाश्रित्य यो धर्मः संप्रवर्तते ।
वर्णधर्मः स उक्तस्तु यथोपनयनं किल ॥१॥
यस्त्वाश्रमानाश्रित्य कश्चिदाचार उच्यते ।
स ब्रह्मचारिधर्मः स्याद् भिक्षा दण्डादिको यथा ॥२॥
वर्णानामाश्रमाणां च योऽधिकृत्य प्रवर्तते ।
स वर्णाश्रमधर्मस्तु यथा मौञ्जी तु मेखला ॥३॥
यो गुणेन प्रदेशेन गुणधर्मः स उच्यते ।
यथा मूर्धाभिषिक्तस्य प्रजानां परिपालनम् ॥४॥
विशिष्टमेकमाश्रित्य यो धर्मः सम्प्रवर्तते ।
नैमित्तिकः स विज्ञेयः प्रायश्चित्तविधिर्यथा ॥५॥

(स्मृ० चं० सं० का० पृ० १४ पंक्ति १)

एवं सामान्यविशेषभावेन धर्मपदार्थो व्याख्यातः ।

सकलजगद्धितप्रेप्सवस्तत्त्वाचार्यादयोऽपि महर्षयो बहुभिर्विचारैः कृत कृतमिति मन्वानास्तद्विद्वांसो इव धर्मं विज्ञातवन्तः कदाचिद्व्यासगुरुमेधातिथि-

निगडैराकृष्टो न्यायोऽपि स्वाधिकारं पराशरगुणस्य विधिवत्कृत्य कृतानुस्वागत-ग्रहणः धर्मं पृच्छति । यथा—

'यदि जानासि भक्तिं मे स्नेहाद्वा मत्प्रियेतया ।
धर्मं ब्रूहि मे तात अनुपृष्टा ब्रूह्य तव ॥१॥

(प० स्कं० ४० ना० का० १ श्लोक ६१)

"प्रिय शिष्य! पुत्रो वा रहस्योपदेशमर्हति नैतरः सोऽयमर्थे छन्दोगी-नेतुमिरायमानान्यायते । 'इदं वाव तज्ज्येष्ठाय पुत्राय पिता ब्रह्म प्रवक्ष्यन् प्रवाचाथ वा अन्तेवासिने ब्राह्मणाय कनीयसे वा'।

(छा० उ० ३.११-२-६ इति)

यतोऽत्र ज्यायसस्य पुत्रत्वं शिष्यत्वं चास्ति, इत्यभिप्रेत्य पराशरोपन्यासः । यदि हि शिष्यैर्वोधो यावतो भक्तिविशेषोऽनुमीयेत तदा तत्र भक्तवत्सलत्वाच्छि-ष्यबुद्ध्या बाह्यबुद्ध्यायानुयानेऽपि पुत्रस्नेहादनुयानेऽस्य सर्वेषामनुपदेशस्य एव धर्मः । ननु सन्दर्भात्स्मृतिभिर्धर्मे धर्मा' श्रोत्रचारिता' परिज्ञातश्च भवन्ति: तत किमिति तद्विषये नो अति प्रश्न इति पराशरवचनस्यानुरोधेन व्याख्या भवति ।

"श्रुता मे मानवा धर्मा वासिष्ठा काश्यपास्तथा
गार्गेया गौतमाश्चैव तथा चौशनसा स्मृता ॥
अत्रेर्विष्णोश्च संवर्ताद्दाक्षाद्वैरस्पतेस्तथा ।
शातातपाच्च हारीताद् बाह्यस्पत्याच्चैव च ॥
आपस्तम्बकृताच्चैव धर्मा' शङ्खस्य लिखितस्य च ।
कात्यायनकृताच्चैव तथा प्राचेतसा मुने" ॥

(प० स्कं० ना० का० ४० ३ श्लोक १६-१६ ३३)

ये श्रुता यथा भूता इत्यर्थः सम्बन्धसामान्यवाचिन्या षष्ठ्या कर्तृत्वविवक्षायां विशेषे पर्यवसानात् तथार्थोऽवसितः । अत्रेरित्यादीनां पञ्चम्यन्तानां श्रुतेत्यनेनानुसम्बन्धः । आपस्तम्बेन कृता, प्रोक्ता इति यावत्, शङ्खस्य लिखितस्य च सम्बन्धिनो धर्मास्तथा प्रोक्तत्वं तत्सम्बन्धित्वम् । प्राचेता एव प्राचेतसो बाधक राजसादाविव स्वार्थे तद्धितः, अनु वा प्राचेतसः पुत्र कश्चिद्धर्मशास्त्रकारः । ननु यैते स्मृतिकर्तारस्तेषां यैते धर्मास्तेषां भवन्ति

परिज्ञाता नाम बुभुक्षवश्चेत्, अग्निहोत्रादयस्तु श्रौता धर्मा बुभुक्षिताश्चेत्तत्र एव ते प्रकल्प्या इत्यत आह—

"श्रुता ह्येते भवत्याता नुत्पत्तौ ते च विस्मृताः ।
अस्मिन्मन्वन्तरे धर्माः कृतत्रेतादिके युगे इति ॥

(म० स्मृ० आ० कां० अ० १ श्लोक १८)

ये प्रत्यक्षानुमानागमा अग्निहोत्रादयो धर्मा एते भवन्ता अनुत्पत्तेरनन्तरमपि प्रसिद्धविधिनिषेधाः आगमार्थो हिरण्यस्तत्र हेतुर्भवत्योक्ता इति व्याख्यातं वस्तुतादात्म्यीकरणानिति पौराणिकाः । अनुमानादिषु विस्मृतिमेतेषु तेषामाह च विस्मृता इति । प्रत्येकाग्निहोत्रादीनां कलौ दुर्लभत्वमभिप्रेत्य कृतत्रेतादिके इत्युक्तमविशेषेण कृतयुगे गृह्यते । अस्मिन्मन्वन्तर इति गृह्यते वैवस्वतमन्वन्तरमेव गृह्यते किन्त्वधिका, दिव्यानां युगानामेकसप्ततिर्मन्वन्तरमिति तु प्रसिद्धमेवास्य च निर्देश उदाहरणार्थो न तु मन्वन्तरान्तर्वर्तीनां स्थानानामपि वा व्यवच्छिन्नानां तद्व्यवच्छेदे प्रयोजनाभावः । नहि बालाविषेषु मन्वन्तरेषु वर्णे विशाल कश्चिद्भुलभावोऽस्मिन्मन्वन्तरे कृतादिषु त्रिषु युगेषु तावेव सम्भावितानुष्ठानाः प्रत्यक्षानुमानयोर्ये धर्मास्तेऽपि बालाविस्मारणेऽगौणत्वात् बुभुक्षितास्तर्हि किन्ते बुभुक्षितमिति जिज्ञासायां व्यासः आह—

"सर्वे धर्मा हृते वेदाः सर्वे वेदाः कलौ युगे ।
चातुर्वर्ण्यं सदाचारं किञ्चित्साधारणं वदेत् ॥

(म० स्मृ० आ० कां० अ० १ श्लोक १६)

सर्वशब्दो देशकालावस्थादिभेदेन धर्माणां बहुविधत्वमाचष्टे, तदेव महाभारते शान्तिपर्वणि ज्ञानदेवसंवादे निरूपितम् ।

"धर्मा बहुविधा लोके सृष्टिमेतामुपाश्रिताः ।
देशजातिकुलापेक्षा युगधर्मास्तथैव च ॥
जातिधर्मा वयोधर्मा युगधर्माश्च शाश्वते ।
शरीरकालधर्माश्च आगमधर्मास्तथैव च ॥
"एतद्धर्मैस्तु शास्त्रेषु निबद्धो लोकवासिभिः ।

(म० स्मृ० आ० कां० अ० १ आगम टी० श्लोक ९५ ८२ पंक्ति ४)

अगति श्रुतिभेदमुखोद्गता मुनीनां यो भेदोऽलेकत्वं बहुलोकोद्भवो वैषां धर्मस्य नोदना लक्षणत्वात् तेषां धर्मानेकत्वाद्धर्माणामनेकत्वमिति भावः। धर्मस्यानेकविधित्वे देशादिभेदे कारणान्यपि देशधर्मविशेषादि। ते च सर्वे वर्णा जातिभिः कृतयुगे यथावदनुष्ठिताः भवन्ति युगस्वाभाविकेन धर्मस्य चतुष्पादोऽपि परिच्छेदाभावात्। त्रेतादिषु कालेषु लोकबाधया धर्मः कलियुगावसाने सर्वलोकानां विनाशो भवति तदेतत्सर्वं पुराणसारे विस्तरेण प्रदर्शितम्।

"कृते चतुष्पात्सकलो ज्ञानकोषाधिविवर्जितः।
युगः प्रविशितो धर्मो बहुलेच्छमकर्तुरा ॥ १ ॥
धर्मः पादविहीनस्तु त्रिविधैः प्रतिष्ठितः।
त्रेतायां द्वापरेऽर्धेन त्र्यांशेनो धर्म इष्यते ॥ २ ॥
त्रिपादहीनस्तिष्ठे तु सत्तामात्रेण तिष्ठते"। इति

(ब० ब्रह्म० आ० कां० अ० १ पृष्ठ ८८ पङ्क्ति ८-९)

तिष्य कलि। बृहस्पतिरपि तथा दर्शयति—

'कृतेऽभूत्सकलो धर्मस्त्रेतायां त्रिपदस्त्रिधा।
पादः प्रविष्टोऽर्धस्तु द्वापरे तु सम्भवः ॥१॥
धर्मार्धार्धो सदा भूत्वा द्विपादो द्वापरे स्थितौ।
त्रिपदो धर्मस्त्रिभिः पादैर्धर्मः पादेन सम्स्थितः ॥२॥

(ब० ब्रह्म० आ० कां० अ० १ आ० टी० पृ० ८२४ पंक्ति ८-११

तथा शिष्टपुराणे कलौ धर्मानाह अतुल्य सद्धेतुत्वेन पुरुषोद्यम अन्यथा:

"आद्ये कृते तु यो धर्मः स त्रेतायां प्रवर्तते।
द्वापरे व्याकुलीभूतः प्रवर्तयति कलौ युगे ॥

[illegible]

तिष्ये बाधाशतमुखो न क्वचिदेव तपस्विनाम्।
तत्रापि नरालस्य तपसा व्याकुलेन्द्रियाः ॥

([illegible] इति)

विष्णुपुराणेऽपि,

"वर्णाश्रमाचारवती प्रवृत्तिर्वेदो कलौ मृताम्।
न तपःसत्यशुद्धिर्वर्णविभिन्नादनहेतुको ॥

वर्णा आश्रमादय, आश्रमा ब्रह्मचर्यादयस्तेषां ये आचारास्तेषां दम इत्यादिनेत्यस्यद्विगिह श्लोकानां प्रवृत्तिर्मता न अवति कलावत्र चातुर्मासादि-वेदाध्ययन तदुक्तकर्मानुष्ठानादिकमपि न भवतीति तात्पर्यम् ।

(वि—कु—१—१—१०)

आदित्यपुराणेऽपि,

"वस्तु कार्तयुगे वर्षो न कर्तव्य कलौ युगे ।
वाचकस्तत्र तत कलौ सार्वो कदाचना ॥ इति

(प० स्कं० आ० कां० अ० १ पृ० ४२ पंक्ति १-२)

अत कलौ मनुष्याणां प्रवासरोगे धर्मे प्रवृत्तस्यावश्यकरो वर्णित युगुलिन , स च द्विविध साधारणोऽसाधारणश्च तत्र साधारणो बृहस्पतिना-निरूपित: ।

"दया क्षमाऽनसूया च शौचानायासमंगलम् ।
कार्पण्यास्पृहते च सर्वसाधारणा इमे ॥

(प० स्कं० आ० कां० अ० १ पृ० ४२ पंक्ति ८-९)

क्षमा सत्य दम: शौचं दानमिन्द्रियसंयम ।
अहिंसा गुरुशुश्रूषा तीर्थानुसरणं दया ॥

आस्तिक्यमहोमलं देवानां च पूजनम् ।
अनभ्यसूया च तथा धर्मसामान्य उच्यते ॥

इति विष्णुस्मृतिवचनम् । (वि—स्कं०—१—१२—१०)

असाधारणोऽपि बृहस्पतिना स्मर्यते ।

"स्वाध्यायोऽध्यापन चापि यजनं याजनं तथा ।
दान प्रतिग्रहश्चापि षट् कर्माण्यग्रजन्मन ॥

इज्याध्ययनदाने च प्रजानामधिपालनम् ।
शस्त्रास्त्रधारण सेवा कर्माणि क्षत्रियस्य तु ॥

स्वाध्यायो यजन दानं पशूनां पालन तथा ।
कुसीदकृषिवाणिज्यं वैश्यकर्मेति सप्त वै ॥

शौचं नाम्नोऽनुज्ञया सत्यसङ्कल्पेन च ।
शूद्रकर्म तथा मन्त्रो नमस्कारोऽस्य नेरितः ॥

(प० । सू० अ० अ० ७ । पृष्ठ ८५ पंक्ति २-१०)

शूद्रस्य वैदिकमन्त्रानधिकारित्वात्तेन नाम इत्याकारकमन्त्रेणैव सर्वाणि कर्माणि कर्तव्यानीति तस्य शूद्रस्योपदेशो नोरितो विहित इति भावः । गीतायामपि भगवानाह—

"ब्राह्मणक्षत्रियविशां शूद्राणां च परंतप ।
कर्माणि प्रविभक्तानि स्वभावप्रभवैर्गुणैः ॥
शमो दमस्तपः शौचं क्षान्तिरार्जवमेव च ।
ज्ञानं विज्ञानमास्तिक्यं ब्रह्मकर्म स्वभावजम् ॥
शौर्यं तेजो धृतिर्दाक्ष्यं युद्धे चाप्यपलायनम् ।
दानमीश्वरभावश्च क्षात्रं कर्म स्वभावजम् ॥
कृषिगोरक्षवाणिज्यं वैश्यकर्म स्वभावजम् ।
परिचर्यात्मकं कर्म शूद्रस्यापि स्वभावजम्" ॥

(गी० अ० १८ श्लो० ४१-४२-४३-४४)

एवं विशिष्टानि धर्मस्वरूपाणि ।

अत्र "चातुर्वर्ण्यसमाचारं किञ्चित्साधारणं अद इति पराशरस्मृत्युक्तवाक्यस्थले साधारणधर्मविषये किञ्चिदिति क्रियाविशेषणम् किन्तु सङ्कोचकत्वात्तस्य विशेषोऽभिव्यक्तत्वात्तेनैव साधारणं ग्रहणं धर्मं वदेति कृतः । असाधारणधर्मविषयकग्रहणे

"ब्रूहि धर्मस्वरूपं त्वं स्थूलं सूक्ष्मं च विस्तरात्" इति कथनेनासाधारणधर्मविषयकं ग्रहणोऽसाधारणं धर्मं विस्तरमुपदिशत इत्याशयेन कृतः । अथ च सन्दर्भे पराशरसाधारणाभ्यामुद्धृतं यत्र च साधारणतस्तेनासाधारणधर्मविषयग्रहणं विस्तरतोऽसाधारणधर्मविषयं ग्रहणं । नारदेन तु साधारणधर्मविज्ञानस्वरूपमनुक्तं स तु श्रीमद्भागवते सप्तमस्कन्धे युधिष्ठिरनारदसंवादे बृहत्सन्तानया तत्कथाप्रसङ्गे युधिष्ठिर उवाचेत्युपक्रम्य

"भगवन्छ्रोतुमिच्छामि नृणां धर्मं सनातनम् ।
वर्णाश्रमाचारयुतं यत्पुमान्विन्दते परम् ॥२॥

भवान्प्रजापतिः साक्षाद्भवतः परमेष्ठिनः ।
हुताशनः सत्यवती ब्रह्म लक्ष्मीश्चतुर्विधिः ॥३॥
वाराहमाहुरा विप्रयर्थं गुह्यं परं विदुः ।
करुणा स्वाभवः शास्त्रं तद्विद्वान् नु तमापदे ॥४॥

मार्कण्डेय उवाच, "नमो भगवते ऽत्राय लोकानां धर्महेतवे ।
वक्ष्ये सनातनं धर्मं नारायणमुखात्कृतम् ॥५॥
यदुक्तमोक्षमार्गेऽस्मिन् दाक्षायिण्या तु धर्मतः ।
लोकानां स्वस्तयेऽत्यन्तं तथो वक्ष्यामि भो ॥६॥
धर्ममूलं हि भगवान्सर्ववेदमयो हरिः ।
स्मृतं च तद्विदां राजन् येन चात्मा प्रसीदति ॥७॥
सत्यं दया तपः शौचं तितिक्षेक्षा शमो दमः ।
अहिंसा ब्रह्मचर्यं च त्यागस्वाध्याय आर्जवम् ॥८॥
सन्तोषः समदृक् सेवा ग्राम्येहोपरमः शनैः ।
नृणां विपर्ययेहेक्षा मौनमात्मविमर्शनम् ॥९॥
अन्नाद्यादेः संविभागो भूतेभ्यश्च यथार्हतः ।
तेष्वात्मदेवताबुद्धिः सुतरां नृषु पाण्डव ॥१०॥
श्रवणं कीर्तनं चास्य स्मरणं महतां गतेः ।
सेवेज्यावनतिर्दास्यं सख्यमात्मसमर्पणम् ॥११॥
"नृणामयं परो धर्मः सर्वेषां समुदाहृतः ।
त्रिशल्लक्षणवान् राजन्सर्वात्मा येन तुष्यति ॥१२

एवं धर्मविधौ वादिविप्रतिपत्तेः सत्त्वात् तदीयविवेकेन दुःशकत्वात् । तत्र च पराशरस्य प्राधान्यं विवक्षित्वा तद्धि धर्मस्वरूपहेतवस्तत्र पराशरस्य धर्मस्वरूपत्वं इति विशेषो दर्शितः । वादिविप्रतिपत्तिस्तत्रैवम् । तार्किकाः स्नातकं कालगुणी धर्माधर्मौ, इत्याहुः ।

"विहितक्रियया स्वर्गो धर्मे पुंसो गुणो मतः ।
प्रतिषिद्धक्रियास्वाद्यः पुंगुणोऽधर्म उच्यते ॥ १ ॥

(प० स्मृ० आ० कां० अ० १ पृ० मक्ति)

इति मीमांसकास्तु 'चोदना लक्षणोऽर्थो धर्मः' (१.१.२) इत्यसूत्रेण तत्र बाहुः प्रमाणयन्ते

"इष्टक्रियागुणद्रव्यो धर्मस्य स्वाधिष्ठाने ।
तेषामैन्द्रियकत्वेऽपि न तद्दृष्टेषु धर्मता ॥ १ ॥
तेन साधनतायेषा नित्यं वेदप्रमाणतः ।
तद्दृष्टेषु च धर्मत्वं तत्साम्येनेन्द्रियादिवत् ॥ २ ॥
[तन्त्र वा० ३।१।१।२।३।४]

प्रभाकरास्तु कार्यविशेषानुकूलत्वैकस्वभावान् धात्वर्थसाध्यान् । यज्ञादिक्रियासाधनभावानुगुणा धर्मसामुत्पत्तेः धर्मस्य दुर्विवेचत्वं च महाभारते भृगुभरद्वाजसंवादे उक्तम् ।

'साधर्म्यं धर्म इति च व्यवसायो न शक्यते ।
कर्तृलक्षणबुद्धिर्धर्मेण भवतां न लक्षणाद्धि ॥ १ ॥
(म० भा० शा० १९६-११-१२)

पूर्वत्र यथार्था क्रियाजातिनिमित्तबुद्धिरुत्पादिता एतद्भिरिति च विश्वाजिद्-वनुवाक्याभ्यां तात्पर्यस्य सामान्याकारः प्रतीयते न तु इष्टगुणादिरूपा विशेषाकारः । वाजिनस्तत्र विशेषाकारे विप्रतिपत्तिः अतएवेदमभिप्रेत्य महाभारते राजधर्मे स्मर्यते ।

'न कालापो न कपिलो न कृष्णा न च लोहिता ।
गवीयाम गुरुधारायां को धर्मं वक्तुमर्हति' ॥ इति
(म० स्वर्ग० अ० ६ श्लो० ७ पृष्ठ ४६, पंक्ति ४)

अनुविश्वाजिनवाक्ययोर्धर्मसामान्याकारे प्रतीतेऽपि अवर्णत्वादुपस्य विशेषाकारस्य उत्र स्फुट प्रतिभासमानत्वात् । रागद्वेषादिभिर्विद्वद्भिर्वेदविद्भिः सद्भिर्धीमद्भिः इष्टसाधनतेव ज्ञेय साधनत्वेनाभ्यनुज्ञात एवविधो धर्मस्तं निबोधत इति योजना । आगमवादिन आहुः ।

यं क्रियाजातमनुष्ठीयमानं शास्त्रज्ञा अनुवन्ति स धर्म इति अवगच्छते यमनुष्ठीयमानं निन्दन्ति तदधर्म इति । यद्यपि धर्मसामान्यस्य विशेषाकारस्य विश्वाजिन्यादिवाक्यादपि प्रतीतिः, तथापि तथा—निन्दन्तु वेदप्रमाणकं ज्ञेयं साधनधर्म इति अनुविश्वाजिनवाक्यमाश्रित्य ।

हारीतोऽप्येवमाह श्रुतिप्रमाणको धर्म इति । एवं सति मीमांसकाभिमतस्य चोदनालक्षणोऽर्थो धर्म इत्यस्य सन्दिग्धस्मृतिकारमतिमतस्य आगम

धर्मलक्षणस्य न कश्चिद्भेद इति स्पष्टम्। प्रभाकरस्तार्किकमतानुसारेण गुणगुणी धर्मधर्मिशब्दाभ्यां "यद्गुणेन यद्व्यवहरन्ति तेनैवासौ धर्मीति प्रभाकरमतम्" इत्यत्र धर्मशब्दः स्वभावे लाक्षणिकः। भाट्टमिश्रस्तु द्रव्यक्रियागुणानां धर्मोऽधर्मश्च मुख्यः, धर्मं चरति कर्मोत्पादयति अहमले लाक्षणिक इति विशेषचिन्तिरिव सम्यगीक्षणे। स्वर्गादिसाधनस्य शास्त्रैकगम्यविशिष्टस्वाभाविकस्य धर्मस्य सर्वतन्त्रसिद्धतेरेवाभावप्रसङ्गात्। सर्वथा विशेषाकारेऽप्यविरोधः। नहि क्रियाक्रियावत्त्वेन द्रव्यं द्रव्यत्वेनाकारया चिन्तयेत्यादावस्तु गुणो न च गुणत्वेन धर्मः किन्तु स्वनिष्ठतिरोधानेन शेषं साधनत्वद्वारार्थः। स चातिशयः द्विविधो द्रव्यक्रियागुणनिष्ठ आत्मनिष्ठश्च, तत्राद्यनिष्ठस्यातिशयस्य साधनत्वात्तत्साधनत्वात्कालान्तरेणोत्पत्तिर्दृश्यते दीर्घकालभवस्वभावाच्च तद्भावितत्वात्। आत्मगुणोऽपूर्वशब्दवाच्यो धर्म इति तार्किकप्रभाकरौ मतः। आत्मनिष्ठस्यापूर्वस्यैव फलोत्पत्तिहेतुत्वं आत्मत्वाद्यपि आहुस्तत्साधनमूर्तद्रव्यक्रियासुखेषु धर्मशब्दोऽस्य इति बोध्यं। तथा च तत्रापि न धर्मोऽस्त्येव। वेदान्तिनस्तु ——

सर्वं खल्विदं ब्रह्म इत्यादिवाक्येभ्य आत्मज्ञानमेव परं धर्मं वदन्ति तथापि व्यवहारदशायां तत्साधनधर्मानुपपत्तेरात्मज्ञानस्य कालभेदं व्यवहारस्य लाघवात् व्यवहारे मङ्गलम् इति बोधायनोक्तत्वाच्च यज्ञादेरेव। किञ्च सर्वासु स्मृतिषु आचारव्यवहारयोर्विचित्रधर्मा विहिताः, यदी तेभ्योऽधिकं सृष्टिनिरूपणमपि कृतम्। तथाप्यज्ञानमेवेति प्रत्यक्षतोऽपि भाति, तत्र च तत्तत्साधनानुपविष्टे, प्रत्युत्पन्नमेवैनिर्भिर्भेदिभिर्वे प्रश्नः कृतः। तत्रैवान्तरमपि दानुबुद्धितम्। तस्मादेव प्रमाणदशायां कारणतोऽस्य धर्मोऽप्रसुप्ते सृष्टिप्रकरणाद्यनेन। अत्र मेधातिथिरिदं तथाभते —

तद्यथा स्वावरणवन्तः सकलरागतयो धर्माधर्मैर्मिश्रिता अत्र प्रतिपाद्यन्ते।
"तमसा बहुरूपेण वेष्टिता कर्महेतुना इति वक्ष्यति च॥

(मनु अ० १ श्लोक ५४)

"यथा दृष्टस्य जीवस्य गतीर्भावैर्विचेतसा।
धर्माधर्मप्रजाभिश्च धर्मे दधात्यतो मनः॥ १॥ इति

(मनु १२ अ० श्लोक २३)

तत्रश्च निरतिशयैश्वर्यहेतुर्धर्मस्तद्विपरीतश्चाधर्मस्तदुभयविज्ञानार्थमिदं शास्त्रं ब्रह्मप्रकाशजनकत्वेनाभ्यर्थितं प्रकाशकाशकसंबन्धम् । गोविन्दराजस्त्वाह इदमेव शास्त्रार्थं परन्तु नैतयोर्धर्मतदिति मतान्तरम् । धर्मस्वरूपप्रकाशे तत्फलकीर्तनमप्रस्तुतविशेषम् । धर्मोऽपि तत्रैव प्रकाश्यत्वात्तदर्थत्वेन नाभ्यर्थ्यते । अन्यच्च

"कर्मणा फलनिर्वृत्तिं शास्त्रेत्युक्ते महर्षिभिः ।
द्वाभ्यां यत्तमाहुः वा वक्तुमादौ च युज्यते ॥ ३ ॥

(मनु १२ अ० श्लोक १)

इदं तु कदाचित् । मुनीनां धर्मविषये प्रश्ने अनेकप्रकारतया अप्रतिपत्तिरेव धर्मकथनभेदेति मन्वन्तुमभियातम् । मनुनैवात्मज्ञानस्य धर्मत्वमन्यथापि ।

"धृतिः क्षमा दमोऽस्तेयं शौचमिन्द्रियनिग्रहः ।
धीर्विद्या सत्यमक्रोधो दशकं धर्मलक्षणम् ॥१॥

(मनु अ० २ श्लोक ११)

इति दशविधधर्माभिधानप्रसङ्गे विद्याशब्दवाच्यमात्मज्ञानं धर्मत्वेन निर्दिष्टम् । तथा भारतेऽपि "आत्मज्ञानं विविक्तं च धर्मं साधारणं नृप", इत्यात्मज्ञानं धर्मत्वेनोपवर्णितम् । यास्कस्त्वेवं तु परमधर्मत्वेनात्मज्ञानमुक्तम् ।

"ब्रह्मचारस्तपोविद्या दानं त्यागोऽथ कर्म च ।
एष तु परमो धर्मो ह्यात्मोपाख्यादर्शनम् ॥१॥

(यास्क० अ० ७ श्लोक ८)

जगत्कारणत्वं च ब्रह्मणस्तत्रैव । यथा च ब्रह्मोपाख्यानाद्यां "अथातो ब्रह्मजिज्ञासा" इतिसूत्रानन्तरम् 'जन्माद्यस्य यतः' इति द्वितीयं सूत्रं प्रतिपादितम् । तत्र जगतो यतो जन्मादि सृष्टिस्थितिप्रलयमिति सूत्रार्थः । तथा च श्रुतिः —

"यतो वा इमानि भूतानि जायन्ते येन जातानि जीवन्ति
यत्प्रयन्त्यभिसंविशन्ति तद्विजिज्ञासस्व तद्ब्रह्म" इति ॥

प्राधान्येन जगदुत्पत्तिस्थितिप्रलयनिमित्तोपादानत्वं ब्रह्मणः प्रतिपादितम् । आत्मज्ञानस्य कारणत्वं धर्मत्वं च प्रकाश्यत्वं कृत्वा संस्कारादिरूपो धर्मस्तद्रूपया द्वितीयाध्यायाधिकरणे निर्दिष्ट इति वाक्यस्य सृष्टिप्रकरणान्तरं इति ज्ञेयम् । अन्योऽन्यत्वाभावात्मकस्य स्वरूपस्य धर्मो लक्ष्यते तथा ।

"धर्मे हृते जगदुच्छेद जगत: कारणं भुवन् ।
आत्मज्ञानं परं धर्मं विद्येतिच्छन्दसोऽब्रवीत् ॥१॥
'आत्मान्यात्मवतस्तस्मादे साधु तदैव कीर्तनम् ।
धर्मोऽन्यस्तु तदन्यत्वाद्युयुक्तो बन्धुबन्धनम् ॥२॥

तार्किकमीमांसकाभिप्रेतादृष्टस्यात्मनिष्ठत्वं धर्मस्य साधनभूतत्वेन द्रव्यगुणक्रियादीनामपि आत्मनिष्ठत्वमिति तादृशधर्माच्छब्दात् इति धर्मस्यमिति वादिविप्रतिपत्तिर्निरस्ता । वेदान्तिनां व्यवहारे सत्यत्वं इत्युक्त्या द्रव्यगुणक्रियादीनां धर्मत्वोक्तिरेव विप्रतिपत्तिः परिहृता । आत्मज्ञानस्य वेदान्तश्रवणमननादिद्वारा ज्ञानजन्यत्वं यदेतत्तदपि

"श्रुतिः सत्या दृशोऽस्तेव शौचमिन्द्रियनिग्रहः ।
धीर्विद्येति × × × × ।

इत्यादिधर्मसंग्रहाणां विद्याशब्देन गृहीतत्वात् तस्याश्च विद्यायाः आत्मानुभूतिरूपायाः क्रियारूपत्वेन क्रियायाः अन्यत्वात् । व्यवहारे अनृतत्व इति सत्यापलापेन वर्णयन्ति, अत्रापि आत्मनि अवस्थानमनिविद्यानाशनं कथनमात्रेण आत्मनिष्ठो द्रव्यगुणक्रियादयो यज्ञादिषु स्वनिष्ठातिशयवत्वात्पूर्वं स्वर्गादिफलिकापरोक्षज्ञान जनयन्ति तथा च सर्वदर्शनकृतां धर्मविषयेऽविप्रतिपत्तिसिद्धा । तस्य च धर्मलक्षणस्य सर्वसम्मतिपत्वात् सत्यानुसारित्वा भवति । तथ्यानुसरणेनानुष्ठानमित्यर्थः । सत्यतानुसरणं चात्मनिष्ठातिशयजनकद्रव्यगुणक्रियादिषु ज्ञेयम् । पाठकानि द्रव्यादि स्वरूपतः संपर्कतश्च शुद्धानि कृतयुगे, न पाठकानि त्रेतायां द्वापरे किंतु कलावपि । एतेषां शुद्धत्वाभावादिषु गुणानां कर्तृका क्रियाश्च वेदितव्याः । एवमेवाभिप्रेत्यावन्तीके धर्मेति वदन्ते ।

"युगेष्वावर्तमानेषु धर्मोऽप्यावर्तते पुनः ।
धर्मेष्वावर्तमानेषु लोकोऽप्यावर्तते पुनः" ॥

(वि० स्मृ० भा० पृ० ४० । मनु० टी० पृ० १२२ श्लो० १४)

एवं द्रव्यगुणक्रियादिलक्षणे अन्यदिदमात्मनिष्ठो धर्मस्यापि लक्षणं यद्दुष्टलक्षणं तदेव परामरेऽपि भवति न लात्मनिष्ठातिशयवत्वधर्मलक्षणम् । तथाहि—

'अन्ये कृतयुगे धर्मास्त्रेतायां द्वापरे युगे ।
अन्ये कलियुगे नृणां युगरूपानुसारतः ॥

(भा० स्कं० ७ अ० को० अ० १ श्लोक ५६)

अतोऽयमन्दो न धर्मस्य स्वरूपान्यत्वमाचष्टे, किन्तु तत्तत्प्रकाराण्यत्वम् अन्यथा धर्मप्रमाणचोदनालक्षणे युगभेदेन भेदापत्तिः । हि किञ्चिद्व्यवस्थाप्रकारमस्ति यदिह चोदनाकृतोऽन्यथा इव त्रेतायां द्वापरे चेयं कलाविति । यथा अग्निहोत्रं कर्तव्यं तस्य चोदना अग्निहोत्रं कुरुष्वेत्येका, परन्तु सार्वत्रिक, कालभेदेन तस्यैताभिरेवाग्नेयकल्पानुष्ठानप्रकारभेदः ।

"सत्यं त्वां सत्येन परिषिञ्चामि" इति सत्यम् परिषिञ्चति, सत्यं त्वेव परिषिञ्चामि इतिवत् । (तै० ब्रा० २-११) अर्थं श्लोकः, "अन्ये कृतयुगे" इति मनुस्मृतौ (अ० १ श्लोक ८५) महाभारते (शा० मो० ५३१-२७०-२६०) कलावाहे चास्ति तत्र तु द्वापरे युगे इत्यत्रापरे इति । युगरूपानुसारतः इत्यत्र युगाद्यानुसारतः इति च पाठभेदो दृश्यते । किमिति लोकाः प्रमोदप्रधानं चक्षुः प्रतिपद्यन्ति जनाः । यत् वसन्तेऽन्ये पदार्थानां स्वभावोऽन्यो ग्रीष्मेऽन्य एव वर्षासु । एवं युगेष्वपि किमिति न पदार्थस्वभावभेदो भवति । युगानां स्वरूपमनुष्ठानपुरुषशरीरादिरूपम् तदनुसारेणानुष्ठानपौष्कल्यं सम्भवति । यथा शक्तुबालस्य कुर्वीतेति स्मरतीमवर्द्धं बौधायनः ।

"यथा कथंचिद्विहितानि शक्त्यवस्थानुरूपतः ।
येन केनापि कार्याणि नैव नित्यानि लोपयेत् ॥

युगभेदेन इत्यनिष्टादिधर्मवैलक्षण्यं बहुभिः श्लोकैः पराशरः उपपादयति ।

"यत् परं कृतयुगे त्रेतायां ज्ञानमुच्यते ।
द्वापरे यज्ञमेवाहुर्दानमेव कलौ युगे ॥१॥
कृते तु मानवा धर्मास्त्रेतायां गौतमाः स्मृताः ।
द्वापरे शङ्खलिखिताः कलौ पाराशराः स्मृताः ॥२॥
त्यजेदेकं कुलस्यार्थे ग्रामस्यार्थे कुलं त्यजेत् ।
द्वापरे कुलमेकं तु कर्तारं तु कलौ युगे ॥३॥

कृते सम्भावशब्देन त्रेतायां स्मर्यतेन च ।
द्वापरे लक्षणादाय कलौ पतति कर्मणा ॥४५॥
कृते नात्कालिकः शाप त्रेतायां दशभिर्दिनैः ।
द्वापरे पैकमासेन कलौ सकलरेणतु ॥४६॥
अभिगम्य कृते दान त्रेतायामुपवीयते ।
द्वापरे याचनानाम सेवया दीयते कलौ" ॥४७॥

(प० स्मृ० आ० का० आ० ३ श्लोक २४-२८)

अत्र षट्सु श्लोकेषु युगादिभेदेन धर्माधर्मादिभेदो प्रदर्शितो । मानवादिशास्त्रोक्तधर्माणां निर्दिष्टयुगभेदेन अनुरूपतया प्रत्यक्षप्रमाणप्रामाण्यमेव लिखितम् । धर्मबहुधर्मत्वादि वस्तुनिष्ठत्वादनर्थप्रापकत्वानधिगतेर्थे ज्ञेयतया विभजते । स्त्रजेदधिपति पतित पुत्रस्याधान्येन पतितेनैव राज्ञा परित्याज्यते न याजयेत् ब्राह्मणादिदेशे निवसेत् न वेदाध्ययनेऽपि कृते सम्भवार्थधर्मवाचक । एव शब्देऽपि योज्यम् । कुलाचारो वाय पतितस्य कृते विवाहभोजनाद्यनुमति कर्तव्यता; सम्भावशब्दिवर्जनम् । 'कृते सम्भावशब्देनेति' कृतादिषिव कलौ पतितस्याभावशब्दिना न स्वय पतति किन्तु कवादिना कर्मणा पतितो भवति । महापुरुषतिरस्कारादौ तदीयशापपरिपाकहेतु काल विभजते कृते वात्कालिक इति एव द्रव्यगुणक्रियात्मकधर्माणां तत्तद्योजकदेशकालादीनां च भेदात्तज्जन्यानुमितिशाबधर्मभेदे सत्यपि वात्कालिकत्वलक्षणभेदो धर्मस्य नेति सम्भावनुसारिणा धर्मस्य द्रव्यगुणक्रियादिभेदमादायैव बोध्या स च धर्म कर्मणोऽप्रोक्तविधोऽपि द्विविध स्थूल सूक्ष्मश्च अन्यतिभिरपि सुखेन बुध्यमान शौचाचमनसन्ध्यावन्दनादि स्थूलो धर्म; शास्त्रार्थगतो परिज्ञातैरवबोद्धु शक्य । कृतत्रेतादिकालान्तरिक्षो द्वौपदीविवाहादि सूक्ष्मो धर्म, तथा च महाभारते—

"कृतं एकस्या कन्याया बहुपतित्व लोकवेदविरुद्ध अन्यायोऽपि विशेषतस्तत्र लाकविरोध स्थूल एव तिर्यक्षपि एकस्या गवि बहुभ्यो बहुपुरुषदर्शनाद्वेदेऽपीव मूलते ।

"एकस्य बहवो जाया भवन्ति नैकस्यै बहव सहपतय: ।

(वै० अ०—८—५—३)

"अनेकस्मिन्पुत्रे हे रत्ने परिस्थापयति तस्यादेको हे जाये विन्दते यन्नैका रत्नो द्वयोर्जुघ्नो परिस्थापयति तस्यान्नैका द्वौ पती विन्दते इति च ।

"लोकवेदविरोधेऽपि धर्मो धर्मेतरोऽपर ।

(म०—भा०—भा०—१२—२८)

लोकविरुद्ध, लोकाचारविरुद्ध, वेदविरुद्ध एकस्य बहवो जाया इत्यादि-वेदवाक्यविरुद्ध। "नैकस्यै बहव सहपतय इत्यत्र श्रुतौ सहेत्यनेन युगपद्-बहुत्वं विवक्षितम् अतु समयभेदेनानो नैकस्मिन्समये पञ्चत्वयो भविष्यन्तीति इति तु मुग्धोक्तिः। लोकवेदविरुद्धोऽयमित्यस्य। कार्यमर्हसि कौन्तेय कस्मात्ते बुद्धिरीदृशीत्युत्तरार्द्धे ज्ञेयम्। एवं युधिष्ठिरमधिक्षिपतो दुर्योधनस्य भ्रान्तिनिवृत्तये युधिष्ठिरः प्राह—

"सूक्ष्मो धर्मो महाराज नास्य विद्मो वयं गतिम्।
पूर्वेषामनुपूर्वेण यातु यानानुयायिनः॥

(म०—आ०—भा०—१३२—२६)

धर्मस्य च बहुपत्निकस्य तस्यैव बहुधा प्रदर्शितम्। एवं धर्मस्याधोगतत्वात् विद्याभ्यासाद्गरीयसी मातापितृशुश्रूषा विभाव्याभ्यास तच्छ्रुत्यैव तस्य ज्ञानाज्ञानयोरिति प्रतिपाद्य सूक्ष्मत्वं धर्मस्य निगमितम्।

'बहुधा दृश्यते धर्मः सूक्ष्म एव हि जायते।

(म०—आ० प०—६२६—६२)

एवं स्थूलसूक्ष्मभेदेन धर्मभेदो द्विविधो वर्णितः कलस्य द्वापरयुगादिवद्-धर्मभेदेनान्ययुगेऽनुष्ठिता कापि धर्मा द्वापरयुगादिवाचका, कलियुगे तत्रैवास्त-मयेन महामुनिभिः कृता, अदेतद्वृद्धनादिधर्माणामपरिवर्तने न सम्भवति अपरवर्तितस्वभावस्य युगिसहस्रैरपि धर्मत्वमशक्यत्वादेतत्सर्वम्।

"कृते युगे तु सत्यर्थं त्रेतायां युगिविभाषितम्।
परावरेषु चान्युक्तं तत्रैवान्ये विधीयते" ॥

(म० स्मृ० अ० मो० अ० १ श्लोक ९४)

इति पराशरादिलोकस्मृत्यन्यत्र माधवेन प्रपञ्चितम्। शेषवशिष्ट तत्तद्युगसाधर्म्यं मुनिभिरन्यैर्विशेषेण भाषितम्। तथा चारण्यपर्वणि पठ्यते।

"कृतं नाम युगं श्रेष्ठं यत्र धर्मः सनातनः।
कृतमेव न कर्तव्यं त्रेतिकाले युगोत्तमे ॥१॥
न तत्र धर्मः क्षीयन्ति न जीवन्ते च वै प्रजाः।
तत कृतयुगं नाम कालेन गुणतांगतम् ॥२॥

कृते युगे चतुष्पाद् हृष्टतुष्टः स चाच्युतः ।
एकत्रेतायुगे बाण त्रैगुण्यपरिवर्जितम् ॥३॥
पादेन हसते धर्मो रजसा याति चाच्युतः ।
सत्यप्रवृत्ताश्च नरा क्रियाधर्मपरायणाः ॥४॥
ततो यज्ञाः प्रवर्तन्ते धर्मोऽथ विविधा क्रियाः ।
स्वधर्मस्था क्रियावन्तो जनास्त्रेतायुगेऽभवन् ॥५॥
विष्णुः प्रीतस्तथायाति चतुर्भा वेद एव च ।
सत्यस्य हृद् विश्रमः सत्ये कश्चिद्व्यवस्थितः ॥ ६ ॥
सत्यात्तत्र्यवलानां नयोऽयो बहवोऽभवन् ।
कामाद्रोषोपद्रवाद्वैव मया दैवकारिता ॥ ७ ॥
कालेकाला सुर्यकरा महाक्लेशवशित्वाचरे ।
एवं द्वापरमासाद्य प्रजा जीवन्त्यधर्मतः ॥ ८ ॥
पादेनैकेन कौन्तेय धर्मः कलियुगे स्थितः ।
वेदाचारः प्रणाश्यन्ति धर्मयज्ञक्रियास्तथा ॥ ९ ॥
ईतयो व्याधयस्तस्मिन् दोषा क्रोधादयस्तथा" ।

(म०—भा०—व०—१४९—११—३०)

तथैव, 'ब्राह्मणा क्षत्रिया वैश्या संकीर्णाः परस्परम् ।
कुटुम्बिनो भविष्यन्ति तपस्तत्वविवर्जिताः ॥ १ ॥
स्वभावात्कलुषकर्मोद्यमान्योन्यमभिद्रुहः ।
भविष्यन्ति नराः सर्वे सम्प्राप्ते युगसंक्षये ॥ २ ॥

(म०—भा०—व०—१४०—१०—५०)

अनुशासनेऽपि "दीर्घकाल ब्रह्मचर्यं आरब्धश्च कमण्डलुः ।
गोत्रान्मातृ सपिण्डात् विवाहो गौरवस्तथा ॥ १ ॥
वरावरयोर्मत्र च कलौ वर्ज्यं द्विजातिभिः ।

[म० स्मृ० आ० कां० अ० १ आचार टीका पृ० १३३० पंक्ति ८-११]

अनुशासने- देवराज्ञ सुतोत्पत्तिर्दत्ता कन्या न दीयते ।
न च गोवधः कार्यः कलौ च न च कमण्डलुः ॥ २ ॥

[म० स्मृ० आ० कां० अ० १ आ० टी० पंक्ति १२-१३]

वायुपुराणेऽपि "कन्यायां पुत्रकाङ्क्षी योऽपि गोतथ तथा ।
कन्यां गच्छेत न कुर्वीत भ्रातृजायां कदाचनम्" ॥
[प० ख० भा० कांड अ० १ पृ० २६४, श्लो० २-४]

तत्रान्येऽपि धर्मज्ञसमयप्रमाणकाः सन्ति, यथा

'क्रियायां प्रजायां दैवस्य नियोजनम् ।
दानिकाचतयोर्योऽपि वरेद्वाग्नेन सदिति ॥ १ ॥
कन्यानामसवर्णानां विवाहश्च द्विजातिभिः ।
आलतानो द्विजाम्बायां धर्मयुद्धेन हिंसनम् ॥ २ ॥
द्विजस्यान्यौ तु नौवालु शोणितस्यापि सङ्ग्रहः ।
सत्रदीक्षा तु सर्वेषां कमण्डलुविधारणम् ॥ ३ ॥
महाप्रस्थानगमनं गोसेक्षप्तिश्च गोसवे ।
सौत्रामण्यामपि सुरासहस्रस्य च सङ्ग्रहः ॥ ४ ॥
अग्निहोत्रहविर्मध्यश्च शेषो लोहापरिग्रहः ।
बालाग्रस्थाग्रस्यापि प्रवेशो विधिवादिव ॥ ५ ॥
वृत्तस्याभ्यासापेक्षमर्थकाधन सदा ।
प्रायश्चित्तविधानं च विप्राणां मरणान्तिकम् ॥ ६ ॥
संसर्गोऽपि स्तेनाद्यैर्मद्यपादकचिञ्चुतिः ।
वरातिथिष्टिश्च्यरथ पशूं पाकरणाक्रिया ॥ ७ ॥
दत्तौरसेतरेषां तु पुत्रत्वेन परिग्रहः ।
सवर्णान्याकुलातुष्टो संसर्गं शोणितैरपि ॥ ८ ॥
अशौनी सङ्ग्रहं कृत्वे परित्यागो गुरुस्त्रिया ।
अधिकसंचयवापूर्णकुक्षपर्शसेव च ॥ ९ ॥
ग्राम्यिर्ं चैव विप्राणां लोमविक्रियां तथा ।
कमुभक्षणनगनेत्रानहरणं द्रोणकर्मस्य ॥ १० ॥
शूद्रेषु वास्तुगोपालकुलमित्रार्धसीरिणाम् ।
भोज्यान्नता गृहस्थस्य तीर्थसेवातिदूरतः ॥ ११ ॥

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१ पाकस्तथा पशूपहरणक्रिया ।

त्रिपक्षे गुरुवारेषु गुरुवद्बुधिरीरिता ।
भानुभूमिर्द्विजाग्र्याणामवस्थाविकता तथा ॥ १२ ॥

तथार्थं तु द्विजस्यार्थो प्रजाङ्गरहितस्य ।
नाशस्थानी प्रवासित्व सुखाभिज्ञानक्रिया ॥ १३ ॥

कलाकारादिषु स्तोत्रैर्यथो विधिचोदितः ।
वर्णेषु सर्ववर्णेषु भिक्षाचर्या विधानतः ॥ १४ ॥

नवाके दशाहे च बलिहानुरुचोदिता ।
आकाशादिषु सूत्रस्य पञ्चमादिदिनानि च ॥ १५ ॥

[विवाहादिदिनानि [illegible]]

भूमिनिम्बकनैरेव वृद्धाद्विभरणं तथा ।
गोदलिलतले वसति शिष्टैराचमनक्रिया ॥ १६ ॥

पितामहविरोधेषु साक्षिणां हस्तकल्पनम् ।
अत्र साक्षि गृहस्थं च सूरिभिस्तत्त्वतत्त्वदैः ॥ १७ ॥

एतानि लोकगुप्त्यर्थं कलेरादौ महात्मभिः ।
निर्वर्तितानि कर्माणि व्यवस्थापूर्वकं पुनः ॥ १८ ॥

समयश्चापि साधूनां प्रमाणं वेदवद् भवेत् ।

[स्मृ० सम० [illegible]]

इति कलिवर्ज्यप्रतिपादितेषु श्लोकेषु लोकगुप्त्यर्थं पुनर्महात्मभिरेतानि कर्माणि व्यवस्थापूर्वकं निबन्धितानीत्यर्थकेनैतानि लोकगुप्त्यर्थमिति श्लोकेन प्रतीयते यदेतानुष्ठाने लोकगुप्तिः भवेदुत्पन्ने च तत् सिद्धोऽयं प्रकारः महात्मनां पुनानां महर्षीणां लोकानुकम्पया कलेरादावेतानि वर्ज्यानि अनुष्ठाने प्रतिषिद्धानि पश्चे कलेरादाविति निर्देशादपुनः एवं वर्ज्यानामननुष्ठाने लोकगुप्तिरुच्छेदवेत् तत्तदनुष्ठानमनुष्ठाने धर्मधर्मयोः । लोकगुप्तिः पुरस्कृत्यैव साधूनां समयश्चापि वेदवत्प्रमाणं भवति अत एव पूज्यपादैस्तात्पर्यकारकैः कलौ प्रमुखधर्मविनाशाय कृतावतारैरेतांकराचार्यैः कलिवर्ज्यत्वेन परिगणितोऽपि कमण्डलुविधारणमित्यनेन संन्यासो गृहीतस्तदानीं

२ विष्टे पाठभेदः

सम्भारसज्जीकृतेन नानाविधयानाद्यन्यकारप्रचारसमुल्लसर्वाकाईंवबौद्धादीनां निरासेन जगद्गुरुमिटोरो तेन सहायेन सर्वेषामुपरि एवमाज्ञातमस्य मस्य विदग्धतालेन लोकगुरुरित्येतत्स्मवेत् सम्बद्धमार्ग लेखस्करमिति यदाधुना समुद्रयानदारिना विदेशयात्रादि ।

यदपि तत्राऽऽचिन्तनीयमन्त्यानसन्ध्यादिभक्ष्याभक्ष्यत्वाद्याविशिष्टाचिन्तनीयात्राजन्तरदेशप्राणविषयविचारः सर्वैस्मरणादि लोकविस्तरभयात् कृतः किञ्चिदवलम्बयास्तु क्रियते । यद्यपि लोकगुरुप्यणीभूतोऽयादौ महातार्थिकीर्त्ति सर्वा च कश्चोपि व्यवस्थापूर्वक द्विजैरिति साहित्यगुरावदसे लोकगुरुत्वमिव्युक्ते शाकरवनमेवेदस्मात् न समायाजमिति प्रतीत्या लेखस्करूपेणापन कर्तव्यमेव न तदोषावहम् । अत्र लोकपदेनेहपरलोकयोरुभयोर्ग्रहणमिति पुण्यलोकप्राप्तिप्रतिबन्धकपापानुष्ठाननिवृत्तये समुद्रयाने विचार्यमिति वाच्यम् सम्भवति एतत्स्मार्तस्मृद्धकस्यमाना मन्यायत्वेन सता कल्पनाया आचारादिलक्षितमीमांसाविचारः ।

ननु नावा समुद्रयाने कथं नित्यनैमित्तिकानां कर्मणां सम्यक्त्वभावादननुष्ठानेननुष्ठानस्य तेषां "नोपतिष्ठेत्तु यः पूर्वां नोपास्ते यस्तु पश्चिमाम् । स शूद्रवद्बहिष्कार्यः सर्वस्माद्द्विजकर्मणः" इति स्मृतिप्रतिषिद्धमिति चेन्न इष्टकाङ्गिनिर्मितवस्तुकं प्राकृतिकं कृत्रिमेष्टकाकं अत्र पूरितम् तावंतित्युक्त्यं काशी गङ्गैव सेव्या इति काशीखण्डपुराणे लोकमिलकुर्व्वं काशी गंगा समासन्नेति विष्णुयोत्तर भुक्तिमुक्तिफलप्रेप्सुरत्यावासेन वेधसः । नोपान्तेवासमंहिद्वाय काशीं गंगां विशेषतः" इति स्कान्दे, 'काशी कलुषनिन्गा पापकृन्ध्वरतास्यनाम् । विधिक्रिया विहीनानां गतिर्गङ्गा बिना नहि ॥ इति भविष्ये, 'भगवद्गीता किञ्चिदधीता गङ्गाजललवकणिका पीता सकृदपि येन मुरारिसमर्चा क्रियते तस्य यमोऽपि न चर्चाम्' । इति चर्पटपञ्जर्यां श्रीभगवत्पादैरुक्ते गाङ्ग जल महात्म्यादिनामक तत्र किञ्चिन्निबन्धः । अत्रस्य परिशुद्धत्वापादनेनादोषात् तेन स्नानभोजनादिव्यवहार उपयोग इव सन्ध्यादिनित्यकर्मस्वप्युपयोगः यथोपलब्ध्यवस्तुभिस्तदनुष्ठानावकाशस्सत्वात् इति स्नानसन्ध्यादिविचारः । ननु तत्र म्लेच्छादिसंसर्गदूषितमपेय पानीयमभक्ष्यमन्नमिति चेन्नापत्र लोकगुरुत्वे मन्त्रबलया तत्रापत्काले महानौकायां परिषिक्ताश्मौ तत्संसर्गलर्गन जलादिग्रहणे दोषाभावात् । तदाह

निर्विशुद्धाचारयोगमावहि
सती विद्या नाशति यत्र सर्वथा।
यत्रास्तुता राजपदी हि पिच्छिले
क्वचिद्युवैश्वर्यमवेन मज्जते ॥

इति वैधर्मेऽनुवृत्तम्।

छान्दोग्योपनिषदि प्रथमप्रपाठके नवमे खण्डे इभ्यमुक्तशिष्ट-कुलाद्यभोजने चाकायकवर्त्म चाटपेत्या स्वभार्यया पुत्रस्तत्रवने पाश्चात्यायेन तद् गृहीत्वा राजपदे च गमनम्। तैत्तिरीयोपनिषदि नवमवल्ल्या द्वितीयानुवाके "अन्नं न निन्द्यात्" तैत्तिरीयोपनिषदि तृतीयवल्ल्या नवमानुवाके "अन्नं न परिचक्षीत" सप्तमानुवाके "अन्नं बहु कुर्वीत व्रतम्" इति च तत्रैव द्वितीयानुवाके "सर्वाभ्यो नुजनिष्ठ प्राकाशस्ये तद्दर्शनादिति वेदान्तदर्शने द्वितीयाध्याये चतुर्थपादेऽष्टाविंशतिसूत्रे तत्रैव च सूत्रे शाङ्करभाष्ये।

"शीलितात्यपमाणस्ये बोलस्यापि यतस्तथा।
लिप्यते न स वाणेन पद्मपत्रमिवाम्भसा" ॥

इति च वचनस्मरणेन येन विना न जीवति तद्भिन्नमसुरामद्यादिकं विहायादि सर्वानातुमत्यन्तमुक्तानमस्य शुद्धस्वाभिन्नस्वादिप्रतिपादन-मन्यत्र एव संगच्छते इत्यलमप्रासंगिकविचारः ॥

यत्र च कर्मे निश्चयद्वारिक जीवाने स्थापिति शङ्कया यमोपस्तम्भक-अस्मादिना सप्तमुखाने स्वाभोगमादीयानिर्वाह सत्यमेवमादि तत्राचरणे-नैव निर्वाहनिवाससम्भवात् इति श्रद्धाविधिः ॥

शिष्टाचारपरम्परायां चान्तिर्हितास्तेषामनिर्वाणं लोक वेदे च श्रूयतेऽथा (ऋग्वेदे—मण्ड० ७—अ २५ सू० ८८ ऋक् ४।)

"वसिष्ठ इ वसतो मानस्योर् ऋषिर्वसिष्ठ स्वपसोऽधि ।
सतावरं विप्र. मुदिनाये ब्रह्मा चान्तुर्यावसन्यायुषारा" इति ॥

(सायणभाष्ये अस्यार्थः) वसिष्ठ इ वसिष्ठ खलु वसतो नाम स्वकीया-वाम् अधारोपयत्, यथा तमृषिम् अवोचन् इत्यादौ, स्वपसः, संस्कारा-कर्मणा चकार वसतो कृतवान् इत्यादि। (ऋग्वेदे मण्ड० ७ अ० २५ सू० ८८ ऋक् ३)

"आ चर्मुद्राव वरुणाय नावं प्रयत्सुदुर्गोरवाय मन्वन् ।
अधि यदपां स्नुभिश्चरात् प्रेङ्खं दीर्घामनु प्रसितिं स्रवन्ति" इति ।

तात्पर्य (अस्यार्थः)— (चर्) यदा वरुणाय प्रसन्नाय त्वयि नावं प्रवहणं उभौ नाव इव दुःखपारौ तारकत्वात्तमनुभूताम् । आरुहाव उभौ आरूढौ बभूविव । तौ च नावं चर् स्रुदुर्गं अर्थं समुद्रार्थं प्रति प्रस्थाय प्रवर्तेण गमनाय, यद् यदा च वरुणायाम् अधि उपरि, स्नुभिः गन्त्रीभिः जलाभिरपि नौभिः चरत्व वर्तावहै, तदा शुभे शोभनार्थं प्रेङ्खं नौकायां दोलायामेव प्रेङ्खावहै, निम्नाभ्यां तैलगौरितरमेतदा प्रसितिस्तन्त्री संस्कारावहै । को सुरत यथा भवति तथा ॥ ऋग्वेदे (अध्या० ७ सूक्त ८९ मंत्र ४) यथा नवे हस्तिवास तृष्णाप्रवितं अस्तिरम् । सुखासु चत्र सूनवे" इति । सायणे (अस्यार्थः) यथा समुद्रोदकानां मध्ये वस्तिवास स्थितवन्तम् अपि अस्तिरं नव स्तोतारं या तृष्णा पिपासा प्रवितं प्राप्तवती । सायणोक्तस्य समुद्रस्य नावानर्तृत्वात् । अन्यत्राप्यर्थो वां मूलेन सुखेन ॥ लोक तु यथा भर्तृहरिणा वैराग्यशतके प्रतिपादितम् ।

"कस्यात्मा निश्चिशङ्कायां शिशिरे शीतार्तो गिरेर्गह्वरे
विद्युत्सार सरितापलिप्तपतयो यत्नेन लब्धाशिनः ।
अन्यारोपवशप्रवृत्तमनसा नाता समस्ताः निशाः
प्रायः कालमरोटकादिषु च सया सुच्छ्रुत्वा सुखं भवम्" ॥

अस्यार्थः—

"वारसीकालता शेषु प्रवर्त्य स्वस्तवर्त्मना ।
इन्द्रियाश्वानिव विप्रतिपन्नानेव संयमी ॥
(रघुवंशे ४ सर्गे ६० श्लो०) नौ वानमार्गेण
गमने दुर्जयात्मा स्वस्तवर्त्मना जगामेत्यर्थः समञ्जसे ॥

न च नावा लघुत्वात्तस्य निश्चिद्धत्वात्स्वस्तवर्त्मना जगामेति वदाय इति वाच्यम् । दृष्टान्तवैषम्यात् । दृष्टान्ते नहि मार्गान्तरेण हेयो दुर्जयत्वं अतिपत्तो इति शिष्टाचिनोपामविचारः ।

म्लेच्छदेशस्तु—

"भाषाद्वैपरीत्यवस्थां परिगन्देशे च विस्तृते ।
स म्लेच्छविषय प्राहुरार्यावर्तमतः परम् ॥

हलायुधकोशेन नामलिङ्गानुशासने भूवर्गे सामान्यलोके उक्तम् ।
अथ यथा- क्वचिद्गुणाभावेऽप्यत्र क्वचित्,

"देशः प्रान्तश्चिः प्राच्य उदीच्यः पश्चिमोत्तरः ।
म्लेच्छा म्लेच्छदेशः स्यान्मध्यदेशस्तु मध्यगः ॥

इति पाठ उपलभ्यते ।

"कृष्णसारस्तु भवति यत्र यत्र स्वभावतः ।
स ज्ञेयो यज्ञियो देशः म्लेच्छदेशस्तत परः ॥

(मनु अ० २ श्लोक २३)

म्लेच्छलक्षणं च—

"गोमांसभक्षको यस्तु लोकवाह्यः स उच्यते ।
सर्वाचारविहीनोऽसौ म्लेच्छ इत्यभिधीयते ॥
"ब्राह्मण्या वैश्यतो जातः सुतो भवति वाग्यः ।
अस्यागमेन नोर्वेद्य म्लेच्छो विप्रलक्षणात्" ॥

इति जातिविवेके सूतसंहितायां म्लेच्छत्यक्तवादीनामुक्तानि प्रायश्चित्तानि आचारलोकिराजाचारा ब्राह्मकाण्डे चतु पञ्चाशत्पञ्चाशत्तमोऽध्यायः । इति म्लेच्छदेशम्लेच्छविचारः ॥ धर्मशास्त्रे पातकोपपातकत्रिपातकमहापातकलाघिनसंकरजातिनीकरणसंकरीकरणादीनां सर्वेषां पापानां प्रायश्चित्तमुक्तम् । अनुद्धाताम्यन्तरभावात्तिर्दिष्टं प्रायश्चित्तं कलानुरूपादिरूपगोपेक्षते तद्विचार्य देशकालादिप्रयोजितं प्रायश्चित्तविवेकादिनिबन्धतो द्रष्टव्यम् इति सामान्यतः प्रायश्चित्तपरिहारविवेकः ॥ "चातुर्वर्ण्यलक्षणोऽयं धर्म इति धर्मलक्षणस्यैकरूपत्वात्सर्वत्र परिवर्तनाभावात्तत्रैव निबन्धा इति संक्षेपतो निबन्धविस्तरसारो विस्तरभयान्न प्रपञ्च्यते ॥

"नागाटनन्दभूवर्षे द्वात्रिंश्यां कुरुक्षेत्रे ।
शुद्धापाढसिते पक्षे निबन्धोऽयं नवो कृतः ॥१॥

राधाप्रसादशास्त्री

THE ATTITUDE OF HINDU SCRIPTURES TOWARDS SOCIAL REFORM

As a result of the impact of the ideas of the East and the West that took place towards the middle of the last century, a considerable thought ferment was produced in the Hindu society, giving rise to the question of social reform. The cause of social reform had the usual vicissitudes during the subsequent decades. Recently, however, it has received a sudden impetus by the realisation, on the part of the present political leaders, of the fact that the national movement can succeed only if it is based on broad-based democracy, and assures equal civic and political rights and opportunities to all, irrespective of their castes and creeds. Political leaders and organisations have begun to advocate a number of apparently heterodox views like the removal of untouchability with a zeal and persistence so intense and sincere, that the usually supine and inactive conservative sections of society have been aroused from their lethargy, and are constrained to aver that they can appreciate Swarajya only if it guarantees the continuance of what they regard to be the *Sanatana Dharma*. This *Sanatana Dharma* they maintain, would not tolerate any of the innovations in the social structure which are sought to be popularised and enforced through the medium of the legislature, either as being beneficial in themselves, or as essential in a democratic age and society. The position of the average Hindu, who has a due regard for his scriptures, but is nevertheless alive to the needs of the times, has thus become very perplexing. He finds that while the custodians of the old religion and tradition aver that there can be practically no reform in the social and socio-religious customs, traditions and institutions, the advocates of reform adopt quite a utilitarian attitude, and hardly care to enquire whether the changes they propose are in consonance with the spirit, if not with

the letter, of the scriptures. In the present article it is proposed to make a scientific enquiry into the attitude of the scriptures towards the question of Social Reform. It may be observed at the outset that I do not propose to examine what the *Sūtras* have to say about any particular problem of reform, but to enquire whether the Sruti and Smṛti contemplate the possibility or advisability of change or reform in the social structure and institutions which they have ordained and described.

A detailed enquiry into the attitude of the Sruti towards this question is not necessary. Sruti is no doubt very important in the realm of ritualism, *Saṁskāras*, and philosophy, but they do not lay down any direct injunctions on social and socio-religious questions like the age of the bride, or the permissibility or otherwise of untouchability, or intercast dinners or marriages. Hence it is that when commentators and *Nibandha* writers want to advocate a particular course of conduct, they hardly ever cite any Sruti authority relied upon for the purpose; they are usually content with citing a series of Smṛti texts. Inferences are no doubt possible from *arthavāda* statements in Sruti, but they would be by no means always in consonance with the views of the Smṛtis or of the conservative sections of the present society. Theoretically Sruti is no doubt more authoritative than Smṛti, but the social customs and institutions had considerably changed in the Smṛti period, and it is interesting to observe how occasionally even orthodox Smṛti and *Nibandha*-writers practically set aside the views of Sruti. The *Paraskara-Gṛhya-Sūtra*[1] prohibits dancing and music to the *Sūlaka*, although it is aware of, and even quotes a Sruti passage, permitting the same. Devanabhaṭṭa follows *Vyāghra-Smṛti* and prescribes *Pitṛtarpaṇa* after the morning bath in opposition to the Sruti injunction that the *Pitṛkarya* is to be performed after middy[2]. Mitramiśra candidly admits that the *Ṛg veda* disapproves

[1] II, 7

[2] *Śrāddha-prakāśa*, *Ahnika-khaṇḍa* p. 295

of adoption but prefers to follow *Vasishtha-smṛti* which permits it[1]. Similarly, certain practices at the *Sautrāmaṇī* sacrifice, he observes, are not to be followed though prescribed in the *Vājasaneya Saṃhitā*, for they are prohibited in the *Kali* age[2]. A little later in the same section Mitramisra refuses to subscribe to the natural corollary of the Śruti passage '*Nāvedavan manute tam bṛhantam*' that the Śūdras can have no knowledge of *Ātman* and are therefore ineligible for spiritual salvation, he follows the views of the Smṛtis and Purāṇas and declares that emancipation is not denied to them. It is true that in all these and similar cases where the *Nibandha* writers differ from the Śruti rules, they try to justify their procedure on some ground or other; but to an impartial mind their reasons on these occasions appear rather as excuses. It may not be difficult to find similar justifications for most of the reforms that are being advocated at present by the politician or the reformer.

The present-day social and socio-religious customs are mainly based upon the rules laid down in the Smṛtis. Let us see what is their attitude towards the question of introducing innovations in their own rules and regulations.

An enquiry into this problem is beset with many difficulties. The very connotation of the term Smṛti has changed in the course of centuries. From certain passages in *Āpastamba Dharma Sūtra*[3], *Gautama Dharma Sūtra*[4] and *Manu-smṛti*[5] discussing the sources of Dharma, the corollary is inevitable that the term *Smṛti* originally indicated, not the *Dharmaśāstra* literature but social rules and conventions as *remembered* by the wise and the pious persons. These rules, when later embodied in the form of books, came to be known as *Smṛtis*, because for a long time they existed only in the *memory* of the elders of the society.

[1] *Vīramitrodaya, paribhāṣā section*, pp. 21 ff.
[2] *Ibid.*
[3] *Dharmajñasamayaḥ pramāṇam vedāḥ.* I. 1.1-2.
[4] *Vedo dharmamūlam. Tadvidāṃ ca smṛtiśīle.* I. 1.1-2.
[5] *Vedaḥ khilo dharmamūlam smṛtiśīle ca tadvidām*, II. 6.

Even if we accept the present connotation of the term Smṛti, we have to face the fact that there exist today more than 50 Smṛtis, and ample evidence is available to show that their number was much greater in the past. The *Vīramitrodaya* of Mitramiśra, the different *Mayūkhas* of Nīlakaṇṭha, and the *Nirṇayasindhu* of Kamalākarabhaṭṭa refer to or quote from 57, 97, and 151 different Smṛtis respectively. Several anonymous Smṛti writers are further introduced by the commentators with word '*iti* or *smaraṇāt*'. The outlook and views of these different writers is not always the same. Many claim to be inspired sages, while some others, like the author of the *Āpastamba Dharma Sūtra*, one of the earliest works on the Dharma Śāstra, frankly confess that they are ordinary human beings, giving in a book form the conventions about social customs and etiquette prevailing among the respectable section of the society.[8] The question of the relative authority of these Smṛti works has to be considered before we discuss their views about the possibility of reform. It will be seen that the way itself in which this problem was solved throws considerable light on the possibility of reform.

Some Smṛtis like the *Cārvāka* and *Buddha* Smṛtis[9] were easily ruled out of order on the score of their heterodoxy. But the problem of the relative authority of the rest was a difficult one to solve. Bṛhaspati and Aṅgiras advanced the view that a Smṛti opposed to *Manu-Smṛti* was to be discarded.[10] Paraśara claimed that his own Smṛti was to be held authoritative in preference to all the rest, including that of *Manu*.[11] Gobhila advocated that in the case of difference of opinion the view of the majority should pre-

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[8]*Tasmād eṣaṃ'veṣa na jñānīte nyūnādhikaṃ vā.* I, 5 4-5
Dharmajñasamayaḥ pramāṇam. Vedāḥ. I 1 2-3

[9]These are no longer available.

[10]Quoted in *Vīramitrodaya paribhāṣā* p. 28, *Saṃskāramādhava, Saṃskāra-kāṇḍa* p. 16.

[11]I, 23.

vail.[20] All these views, however, were found inadequate and inconvenient. The large number of Smṛtis, that were written in the first millennium of the Christian era, owed their existence not to literary ambition but to the pressing necessity of having authoritative manuals that would fill in the lacunæ in the earlier works or would be more in consonance with spirit of the age. Thus to cite a few examples, *Kātyāyana smṛti* was written as a supplement to the work of Gobhila.[21] The introductory verses of *Devala-Smṛti* make it clear that it was composed in Sindh sometime after the eighth century A.D. to meet the new situation created by the military and proselyting activities of the Muslims. The needs of the Sindh situation could hardly have been met by consulting over and over again Manu or Paṭṭikā. A new Smṛti was necessary and the society saw to it that it was forthcoming. As new Smṛtis were thus being composed to fill the lacunæ in the old ones or to meet the needs of new exigencies, the view that in case of difference of opinion, either Manu or Parāśara or the majority was to be followed was found to be inconvenient. Kumārila in his *Tantravārtika*, therefore, advanced the historically correct view that in the case of difference of opinion among the Smṛtis an option was to be assumed. The position of the *Smṛtichandrikā* is also the same.[22] Medhātithi goes a step further and declares that the usual list of the authoritative Smṛtis is not exhaustive, and that even today a new Smṛti can be composed which would be authoritative for the posterity.[23] It was this theory that all the Smṛtis were equally

[20] *Vimalāc yatra vikyātāḥ prāmāṇyam tatra bhāṣyakāḥ, Tulyapramāṇakatve tu syāt tvam prakṛtiḥ.* III, 149

[21] Cf. *Atrāsto Gobhilokthāmnāyaḥ sarva karmasu, Ayaṃ jñātvā vidhiḥ samyag dharmasyā pad'pavat* I 1.

[22] Cf. *Vikalpa eva hi vyāyatvāt vyavahāraprasaṅgataḥ*, p. 401.

[23] *Smṛtyantaraṃ tu yatra syādāpyaṃ saṃvyavahāre'pi vikalpa iyaṃkaṃ bhavati. Ata eva anyāyadarśane Gautamaḥ 'Tulyabalavirodhe vikalpaḥ'*

[24] Medhātithi on Manu II 6. *'Adyatve ye smṛtyantarāyaṃkte bhāṣyakāro bhāṣyaṃ granthakarapaṭhadbhiḥ sa nirmāṇa Manvādibhir pramāṇa iyaṃ*

authoritative that simplified the task of the medieval *Nibandha* writers. They found that current social customs no longer rigidly conformed to any set of rules given in any one particular Smṛti. They therefore prepared their digests by quoting only from such texts, the rules in which were still current. The recognition of the principle, that an option was to be assumed in case of difference of opinion among the Smṛti writers, coupled with the fact that Smṛtis continued to be composed down to the Muslim period with a view to meet the needs of new situations, makes it clear that Hindu social institutions and customs were never static; they were dynamic and were governed according to rules which were often changed by the succeeding Smṛti writers, with a view to bring them more in conformity with the spirit of the age.

An examination of the material sources of Dharma, as given by the Smṛtis, will also throw considerable light on the question of their attitude towards the possibility or advisability of change in the rules laid down by them. After mentioning Śruti and Smṛti most of the Smṛti works refer also to *sadācāra* and *pariṣad* as sources of Dharma, a fact which shows clearly that they did not intend their rules about social customs and institutions to be applicable for all times to come. It is no doubt true that they have put certain limitations with reference to *sadācāra* and *pariṣad*, it will, however, appear from the following discussion that the recognition of these as sources of Dharma has made the Hindu social institutions living organisms.

Some writers like Vasiṣṭha[7] no doubt maintain that *sadācāra* means the conduct of a person who is practically above all human infirmities, and that, it is to be followed only if it is not opposed to the dictates of the Śrutis and Smṛtis. In practice, however, the state of affairs was considerably different. It will become at once plain that the conduct of a *śiṣṭa* as described by Vasiṣṭha is hardly likely

[7] I. 1.

to throw any light on topics of social controversy. *Sadacara* really meant social customs and practices approved and followed by the higher sections of society. This becomes abundantly clear from Baudhāyana's description of the observed fivefold differences between the contemporary practices of the south and of the north[18]. In the south society had given its seal of approval to the marriage with the daughter of a maternal uncle and paternal aunt; in the north trade in wool, enlistment in the army, going out to foreign countries for commerce, etc., were common. These practices were opposed to the Śāstra rules on the point, but they were permissible, says Baudhāyana, in their respective localities as they were sanctioned by *sadacara*. It is therefore clear from Baudhāyana that *Sadācara* was not the conduct of a person who had attained spiritual realisation, it embodied current social practices followed by the respectable persons which were often opposed to the general tenor of the Smṛti rules.

It is *sadācāra* in the sense of approved social customs and traditions which was the main source of Dharmaśāstra. No doubt in theory the Smṛtis are believed to be based on Śrutis, but even ancient writers, when pressed to demonstrate the truth of this theory had to confess that, in some cases at any rate, the requisite Śruti passage had to be assumed to be belonging to a version no longer in existence[19]. Historically this may have been true in some cases, but the argument reminds us of the position of a litigant summoning a dead witness and then maintaining, that if he were alive, he would have supported his case. Early works like *Āpastamba Dharma Sūtra* enable us to realise to what a large extent Smṛti rules were based on *sadācāra* as above defined. The work distinctly says that the rules given therein were based upon Śruti and social conventions as accepted by the righteous[20]. Apastamba argues that after all we have to rely

[18] I, 1, 18 ff.

[19] Cf. *Jaimini-nyaya-mālā-vistāra*, II, 3, 1ff.

[20] Cf. *Dharmajñasamayaḥ pramāṇam, Vedāḥ*, I, 1, 1–2.

on *sadacara* in social and socio-religious matters[31]. For, Dharma and Adharma do not stalk abroad in a corporeal form announcing themselves for the benefit of humanity: nor do gods, manes or Gandharvas help us in the matter. Under these circumstances we must regard that as Dharma which is praised by the Aryas, and that as Adharma which is condemned by them. The view of the *Mahabharata* is also the same.[32] The Great Epic draws the natural corollary from this position and states that *sadacara* cannot be defined with accuracy, for what is *sadacara* in one case may be the *reverse* in another.[33]

That *sadacara* really meant the customs and traditions prevailing in the respectable sections of society will become further clear from the way in which the Sutras sometimes supplement their own rules. *Asvalayana Grihya Sutra*[34], when proceeding to describe the marriage ritual, observes that local customs are numerous and various and that these, though not mentioned in his manual, ought to be followed in practice. *Baudhayana Dharma Sutra*[35] lays down some rules regarding *Asauca* or post-mortem impurities and adds that popular customs were to be followed in matters not mentioned by him. *Apastamba Dharma Sutra*[36], while treating of the same topic, recommends that the mourners should do what ladies advise them to perform. It is thus clear that *sadacara*, which formed the main material source of Smrtis, was not the conduct of persons who had conquered their lower self; it was made up of customs and traditions approved

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[31]*Na dharmadharmau carataḥ yadaivo nalpi. Na devagandharvaḥ pitara nyavakipte evam dharmaḥ yamadharma iti. Yam kuryaḥ kryacaranam prakramanta ta dharmaḥ yam gaccati sadhavaḥ*, I, 7, 2-7

[32]*Tarko'pratiṣṭhaḥ smṛtayo vibhinna naiko muniryasya vacaḥ pramanam, Dharmasya tattvam nihitam guhayam mahajano yena gatasa panthaḥ*, Vanaparvan, 3, 3, 117.

[33]*Na hi sarvatraḥ kalpaḥ sadacaraḥ samprasuyate.*

Yamasmiṣṭaḥ prabhavati so'para bhibhate punaḥ. XII, 260, 18

[34]I, 7, 1.

[35]I, 5 131.

[36]*Gurvanaṣṭya yat striya dhanat kuryaḥ* II, 6, 15, 100.

and followed by the respectable sections of society.

The theory that *sadācāra* was valid only if not contrary to the dicta of Srutis and Smrtis simply indicated deep reverence for the Sastras, but was by no means always consistent with actual practice. We have seen already how this is the natural corollary from the celebrated passage in *Baudhāyana Dharma Sūtra* which describes the five peculiar customs of the southerners and northerners. But specific concrete instances from the Smrtis themselves are not lacking. A concrete case of *sadācāra* overruling a clear Sruti injunction to the contrary is to be found in *Apastamba Dharma Sutra*[29] where the author quotes a passage from *Vājasaneyi Brāhmana*, enjoining in the clearest terms Vedic study during a thunderstorm, but prefers to follow the contrary practice of observing holidays on such occasions, because it was sanctioned by *Āryasamaya*, i.e., *sadācāra*. Brhaspati observes that the customs of the family, caste, and locality (which together constitute *sadācāra*) were to be enforced by the king in the form in which they prevailed, for otherwise, subjects would rebel.[30] Mitramisra, while commenting on this passage, observes that the king has to permit non-scriptural and anti-scriptural practices, if sanctioned by local usage, because there is no possibility of the punishment of social boycott in cases like the marriage with a maternal uncle's daughter in the Deccan which, though opposed to the scriptures, were yet universally followed.[31] A verse attributed to Devala by Devanabhatta but to Bhrgu by Kamalakarabhatta exhorts the king to follow scrupulously established customs, apparently irrespective of the consideration whether they were in consonance

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[29] *Athāpy Vājasaneyi-brāhmaṇa . . tasmāt sāmnyāh svādyāyamādāv adhīyīrann . . Evam vāhyāyasamayam vipratiṣiddham. Adhyāyasamādhyāyam kuryādityāhuḥ. Tasmādarthakam eṣāmādāv eva-brāhmaṇasya svādyāyaḥ.* I, 4, 12, 4 ff

[30] *Dātāyādakulānāṁ ca ye dharmāḥ prāk pratiṣṭhitāḥ | Tathaiva te pālyāḥ yāvat prajāḥ prakupitā na syuḥ || Anapavādibhirbhavati balam kopaś ca nāyati.* II, 28 ff

[31] Cf. *Tasmādeva-jātyādyācāraṁ-viruddhācārasya vyavahāra-pratibandhā lakṣmīpatyādīnāṁ nāma.*

with the *Sāstras* or not[80]. According to Sumantu[81], *kuladēśa* or family customs, which constitute one variety of *sadācāra*, are to be followed though they may be opposed to the testimony of all the Sastras put together. Asahāya, while commenting upon *Nārada-Smṛti* I, 40, adopts the same view and declares that accepted customs are not to be rejected on the mere ground that they are opposed to the Sastras[82].

It will be thus seen that by recognising *sadācāra* as a source of Dharma, by equating it with the customs and practices of the respectable sections of the society and by preferring them, if necessary, to the older rules contained in scriptures, Smṛtis have tried to avoid the catastrophe of social and socio-religious institutions being governed by obsolete and unsuitable rules and regulations. *Sadācāra* varied with time and place; hence it is that Smṛtis declare that Dharma changes with age[83]. That at least some of the Smṛtis owe their existence to the anxiety of the thinkers of the age to have new codes more in conformity with the spirit and need of the times will be clear from the preamble of *Devala Smṛti*[84] as also from verses like the one in *Parāśara Smṛti*[85] which declares that *Manu-Smṛti* was suitable for the Kṛta age, Gautama for the Tretā, Śaṅkha-Likhita for the Dvapara and Parasara for the Kali.

That the Smṛtis had anticipated the possibility and advisability of changes becoming necessary in their rules would become further clear from their recognition of *Parṣads* or assemblies of the pious and learned as sources of Dharma.

[80] *Smṛtcandrikā, Śrāddha-kāṇḍa* p. 25

[81] *Yatra bhinnapratibhānā sarvakarmasu bhūyasā | Tatrāsau kuladharmaḥ syādakarmaṇa bhūyasā || Sa gaṇyaḥ mahābāho sarvaśāstrodito'pi ca* Quoted in *Smṛtcandrikā, Śrāddha-kāṇḍa* p. 9

[82] *Deśe deśe ya ācārāḥ pūrvaparyāgatāḥ | te'pi dharmabhāvamāsādya laṅghanīyāḥ kadācana.*

[83] *Anya kṛtayuga dharmastretāyāṁ dvāpare pare | Anya kaliyuge nṛṇāṁ yuganāmānurūpataḥ || Parāśara*, I, 22.

[84] *Siddhānte sukhāmnāya Devalam vasmaṭhāmam. Sāmānya manavyāḥ sarve ahaṁ vacanamabravīt || 1.*
Bhagavan mlecchamāṭe ke kathaṁ śuddhimavāpnuyuḥ 2.

[85] I, 24.

Most of the Smṛtis[24] lay down that a *Parṣad*, consisting of about 10 learned and religious persons, was to be the guide of society in matters which were either doubtful or not anticipated by the Sutras. *Taittirīya-upaniṣad*[25] also states that when doubts arise as to what is permissable and what is not, the view of the pious respectable men was to prevail. The *Parṣad*, as conceived by the Smṛtis, had limited functions because most of the *sadācāra* or *dharmamaya* was already codified in the form of Smṛtis by that time. In the pre-Smṛti period, *Parṣad* enjoyed the status and influence later claimed by the Smṛtis. It was then an assemblage or college of the celebrities of the particular locality or clan, which was naturally almost the sole custodian of Dharma in its socio-religious aspect, as the Sruti were generally silent on the point and Smṛtis were yet to come into existence. Like the modern *Pīṭhas* of Śaṅkarācāryas, *Parṣad* used to see that the rules of Dharma, of which they were the custodians, were followed by society; they used to punish those who violated them by pronouncing and enforcing social and religous boycotts against the offenders[26]. When *dharmaśāstramaya* came to be codified, the *Parṣad* naturally ceased to be a standing body. Even then for many years it went on functioning and enlightening the society on points on which the Smṛtis were silent. Nay, Smṛtis themselves used to refer their readers to a *Parṣad* on points not dealt with by them[27].

The decline in the importance of the *Parṣad* owing to the systematic codification of Dharmaśāstra was contemporaneous with the systematic departmentalisation in the Hindu Polity. However good a code may be, no society or govern-

[24] E.g. *Gautama*, III, 10, 47 ff, *Manu* X 109 etc.

[25] *Atha yadi te vicikitsā vā karmavicikitsā vā syāt, ye tatra Brāhmaṇāḥ saṁvarsino yukta āyukta ākāla dharmakāmāḥ syuḥ, yathā te tatra varteran, tathā tatra vartethāḥ.* I, 11.

[26] Cf. *Atha asya (abhiśastasya) pratyaṣṭhāḥ parṣadyadapetaṁ bhajeyuḥ, saṁ cānvatīrabhāṣeta iti. Caritvā ṣaṭ paṣṭa ghṛtam madhu lavaṇamāṁsabhakṣaṇam Brāhmaṇāḥ bruyuḥ, sa tam brūyāt, anuttīrṇaḥ prabhuḥ.* *Baudhāyana Dharma Sūtra* II, 1, 14.

[27] *Ayadalaḥ parṣaḥ* *Āpastamba Dharma Sūtra*, I, 3, 11, 37.

ment can for a long time afford to dispense with an agency to review its working and remedy its defects. *Parisads* being no longer standing bodies had ceased to discharge this function effectively. We therefore find some works advocating the appointment of a special minister for the portfolio of Dharma. The designation of this minister was to be *Pandita* according to Sukra and his duty was to survey current and obsolete social and socio-religous practices, to enquire as to which of them were sanctioned by the Sastras and which not, and to advise the king accordingly[46]. The *Vinayasthitisthapakas* under the Imperial Guptas[47], the *Dharmamahamatras*[48] under the Rashtrakutas, and the *Dharmapradhanas* under the Cedis[49] were very probably discharging functions similar to those of the *Pandita* of Sukra, and guiding the society about the changes rendered necessary by new exigencies. With the collapse of the Hindu states, the society was deprived of the guidence of this official agency. The *Parisads*, which were formerly discharging this function as we have seen already, had disappeared as their functions had been usurped by the minister in charge of religion. The disappearance of the *Parisad* and *Pandita*, (i.e., the minister in charge of Dharma) was mainly responsible for the Hindu social institutions being governed during the last eight or nine centuries by rules that were becoming progressively obsolete and antiquated.

It will be seen from the above discussion that the recognition of *sadacara* and *parisad* as sources of Dharma proves that Hindu Sastras did not regard their rules about social customs and institutions as too sacrosanct to be touched by the posterity. They were not only far-sighted enough to recognise that changes in their rules would become necessary, but

[46] Cf. *Varhaspatiya prasna dharmah he lokasamvitah, Sastrena ke samviditah sanadhyante ca kridhuna Lokavirudhaviruddha ye pravitta sam vartayet Nripam sambodhayetkaca paratraba sukhapradah.* II 99—100.

[47] A. S. R. 1903-4, p. 109

[48] E. I. XI p. 276.

[49] J. A. S. B. XXXI p. 116.

they have also described the machinery which society was to use for the purpose. Hindu society was making use of that machinery or its equivalent down to the Muslim times and was, therefore, a living and vigorous organism. The present-day complications have arisen because the social machine has been practically left neglected and unrepaired for the last eight hundred years. Faced with the present social and socio-religious problems which are threatening its integrity and solidarity, Hindu society would be acting, not only in a suicidal but also anti-scriptural manner, if it refuses to get them, investigated by modern *ṛṣis* like Mahatma Gandhi or Pandit Madan Mohan Malaviya with a view to follow the solution proposed by them. Personages like those just mentioned, who have deep reverence for the ancient culture, tradition and civilisation, and who also realise the needs of the present situation have, according to the Smṛti view, every right to give rulings on doubtful or new points. In the cases of conflicts between the Śāstric text, as in the case of the marriageable age of the bride, they have a right, according to Vyāsa, to pronounce which of the texts are to be preferred in the present age[44]. Nay, when we remember the dictum of Manu that even Dharma is to be abandoned if it leads to unhappiness or is hated by the population in general[45], the present day *Parṣad of Ṛṣiṣ* would be justified even in recommending a course of conduct which, though going against the letter of any particular Śāstric text, may be now found to be in the best interest of Dharma and society. May it be hoped that the leading lights of Hindusan will realise this duty imposed upon them by Smṛtis and meet in a *Parṣad* to review the whole situation and pronounce their authoritative views on the points of the present-day controversies?

A. S. ALTEKAR

[44] *Tasmādvirodhe dharmasya vikalpa garīyasāṃ | Yato bāhyataro vidvān hareyādbharmasya saṃśayam || Vyāsa* quoted in *Saṃskārakāṇḍa*, p. 17

[45] *Parityajedarthakāmau yau syātāṃ dharmavarjitau | Dharmamapyaśukhodarkam loka vidvipanaṃ ca || IV, 176.*

THE POSITION OF UNTOUCHABLES IN SANATANA DHARMA

The subject of the entry of the untouchables into Hindu Temples is causing great anxiety to people interested in the political progress of the Hindus. The fortunate thing is, it must be acknowledged at the outset, that the untouchables themselves are not under any circumstances going to leave the Hindu society. They may resort to *Satyagraha* and the severely orthodox Hindus may oppose them not only with abuses but bricks and stones. But they are determined to remain Hindus as they really are, and not to go over to any other religion or found a new society altogether. For this very reason, I think, they will succeed in their righteous attempt, though it may take some time yet. We do not, however, think that this time will be the establishment of Swaraj in India as Mahatmaji says, probably with a purpose. For Swaraj will not dictate to any religion much less to the Hindu society. We must, therefore, try to induce the orthodox Hindus to admit the untouchables to their full privileges by convincing them of the necessity and propriety of such a step.

The question has two aspects, the historical and the religious. So far as history goes, it is generally agreed that the Aryans came to India about 6,000 years ago and settled in the vast country which was only partially inhabited by an earlier people, gradually from the Punjab down to Cape Comorin. The previously settled non Aryan people were gradually incorporated into the political entity as Sûdras and the whole people became what is now known as the Hindu nation. One portion of these people lived outside the Aryan villages, or we may put in the other way and say, that the Aryans founded their own villages by the side of those of the aborigines and the Aryan villages were more cleanly than the latter. The Hindus, as is well known, consist of

four Varṇas or colours and the Sudras being black in complexion were not admitted to marriage relations, though the other three Aryan Varṇas based on difference of profession intermarried among themselves, being of the same race and complexion. Some of the Śūdras were treated as unfit for being touched on sacred occasions, as they were of low professions and unclean habits and they were not allowed to reside in Aryan villages. These were called *Caṇḍālas*, who subsequently became the type of untouchables in later time.

The Sudras were not allowed to learn the Vedas as they really could not do it; but they were allowed to learn the Vedantic doctrine as is evidenced by the story of the Sūdra king Jānaśruti in the Upaniṣadas. The *Bhagavadgita* admitted the Sudras and even the Caṇḍālas called *Papa-yonis* to the *Bhakti-mārga* or the path of devotion, and through it to Mokṣa, as is clear from the line: पापयोनयः । स्त्रियो वैश्यास्तथा शूद्रास्तेऽपि यान्ति परां गतिम्. These people were up to this time kept apart in social intercourse solely for their unclean professions.

Some of the non-Aryans lived in separate villages and had even kings or chiefs of their own. They were generally called *Nisādas*. We find in the *Rāmāyaṇa* that the Niṣāda king Guha was a chief who lived on the ganges and who was a friend of Rāma and his father. He and his men were certainly then not untouchables. In the Mahābhārata story, Matsyagandhā was even married by an ancestor of the Pandavas. She was the daughter of a Dasa chief or fisherman chieftain. The Niṣādas and the Dasas were killers of animals and fish and lived on them. How these also subsequently became untouchable we will presently show.

All the non-Aryans whether they lived in Aryan villages or outside them or in villages and communities of their own were treated as Sudras. The best proof of this is that Pāṇini has a Sūtra in which he treats even the latter as Sūdras for he speaks of two sets of Sūdras, the *Niravasita* (those kept out) and the *Anirvasita* (those not kept out). They

were all Śūdras and the Hindu society has no fifth varṇa, the word *pañchama* being used later. Even in the Puruṣa medha list of chapter XXX of the White Yajurveda there are only four castes mentioned. There are mentioned many professions and of the lowest class we have Dāsa, Kaivarta, Dhīvara and Caṇḍāla. But they are Śūdra still (see our *History of Sanskrit Literature*, Sec. 1, page 150). The Dhīvaras and the Naiḍas were not untouchables as we have already shown from the *Rāmāyaṇa* and the *Mahābhārata*. They became so in later times for the following reason.

When Buddhism was supplanted, it left a legacy which Hinduism took up with great zest, namely the doctrine of *Ahiṁsa*. Not only were the most unclearly professions now treated as untouchable but all those which involved any killing of life. The Naiḍa, the Dhīvara, the washerman and others, not to speak of the Cāṇḍālas, were now treated as untouchables and these are hated in several Smṛtis. The Cāṇḍālas alone were formerly kept out of the village, but all these though living in villages were now banished as untouchables. When animal sacrifices were performed, even Brahmins did the duty of cutting the sacrificed animal. After the down-fall of Buddhism about 800 A.D. all destroyers of life were treated as untouchables, including the butchers.

But the historical dissertation cannot satisfy the orthodox mind and we must examine how the position stands so far as *śāstra* is concerned. It is clear that dealings in public, entry into temples, places of general resort such as railways etc., are enumerated in a Smṛti as places and occasions where untouchability does not exist. The position is thus clear. In the first place there is no fifth *Varṇa* in the Hindu Society. 'चत्वार एव वर्णाः नास्ति पंचमः' Secondly, the above dictum of Devala allows untouchables entry into temples without any fear of sin. There are no doubt provisions in certain *Āgamas* which require the untouchables not to come within a certain limit of temples. But Āgamas are not

binding on all. Indeed they are not mentioned among the *dharma-mulas* being neither Sruti nor Smrti. They are binding only on their followers and not on Sanatanis. It is clear that *Dharmasastra* properly interpreted, though it does not sanction intermarriage or interdining, plainly sanctions social and political intercourse as also entry into temples to untouchables.

Pandit Madan Mohan Malaviyaji has suggested that these untouchables may be converted into touchables by preaching to them the *mantra* 'ॐ नमो भगवते वासुदेवाय' This is no doubt a remedy which will satisfy many orthodox Sanatanis. But we think even this is not necessary. Every sincere Sanatanist must consent to this reform with a clear conscience on the authority of Devala. It may be noted that every sect dissenting from Sanatana school has done away with untouchability, beginning from the *Mahanubhavas* of the 11th century down to the Aryasamajes of the 19th. It is in the interest of the Hindu society, therefore, that it should give no cause for further dissentions, but admit untouchables to their due privileges.

C. V. VAIDYA

DECLINE OF BUDDHISM

Eliot[1] in his "Hinduism and Buddhism" is at a loss to account for the disappearance of Buddhism in the land of its birth, so he takes it to be almost a phenomenon. It is really a mystery that the religion which has acquired the greatest multitude of adherents outside India should be extinct in India. Eliot has devoted a chapter to it and has succeeded in finding out some of the important causes and M.M. Hara Prasad Sastri has thrown out some important hints here and there. Like Buddhism the causes of its decline have disappeared.

It is a common dictum that Buddhism is a revolt against Hinduism. It is obvious that Hinduism—especially the philosophy of the Upanisads—is the essence of Buddhism and this has been conclusively demonstrated by Edmund Holmes in his "Creed of Buddha". If Buddhism was a revolt, it was a revolt against the ritualistic hotch-potch of Hinduism. Some corruptions had crept into Hinduism—such as the autocracy of the priestly class, their cruelty and blood-shed in the sacrifice of animals and the galling humiliation of those who had the misfortune to be placed outside the pale of the twice-born classes. They had ignored the doctrines of the Upanisads and wanted to chain the minds of the people with elaborate rituals, sacrifices and mummeries. Oldenberg[2] has rightly said. 'The blood of the sacrificial victim no longer brings reconciliation to the dismayed and erring heart of man; new ways are sought and found to overcome the enemy within the heart and to become pure, whole and happy. So they dreamed morbid and proud dreams of that which is beyond all time and of the peculiar government which is within these everlasting realms'.

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[1] *Hinduism and Buddhism* Vol. II Chapter XXIV, pp. 107-24

[2] *Buddha*, p. 5.

Dr. Tagore[1] in his "Main currents of Indian History" points out that Buddhism indicates the revolt of the Kshatriyas against the predominance of the Brahmans. The cravings of the spirit in man could no longer be satisfied in the performance of Vedic rituals. Oldenberg[2] says "Invariably, when a nation has been in a position to develope its intellectual life in purity and tranquility through a long period of time, there recurs that phenomenon, specially observable in the domain of spiritual life, which we may venture to describe as a shifting of the centre of gravity of all supreme human interests from without to within, an old faith which promised to man somehow or other by an offensive and defensive alliance with godhead, power, prosperity, victory, subjection of their enemies will, sometimes by imperceptible degrees and sometimes by great catastrophes be supplanted by a new phase of thought whose watchwords are no longer welfare, victory, dominion, but rest, peace, happiness and deliverance."

So it appears that Buddhism was a reaction against the ritualism of the Vedic religion.

Paul Dahlke in his "Buddhist essays" has happily hit upon the idea that Buddhism flourished most luxuriantly in the sunshine of great dynasties. Buddhi received the patronage of Bimbisara and Ajatasatru. But for Asoka Buddhism might have shared the fate of so many local cults of India. It was Asoka who made it world religion. It was Kaniṣka who gave it a new lease of life when Pārśva and Aśvaghosa developed Mahayāna in Peshawar. It was a Tsong-sam Gampo who introduced Buddhism in Tibet and it was Emperor Mingti who made it the religion of China. The Pāla kings of Magadha were its last patrons in India. Royal patronage has often been the main factor for the success of Buddhism.

When Megasthenes was at the court of Chandragupta

[1] *Visvabharati quarterly*, Vol. 3.
[2] *Buddha* p. 3.

Buddhism could count only a handful of followers. When Fahian visited India, Buddhism was flourishing side by side with Brāhmanism. But it was never the predominant religion in India except perhaps for a short period in the reign of Asoka. When Yuan Chwang and I'tsing visited India in the 7th century, decline had set in and many monasteries were in ruins. Gautama became Buddha at Gaya, and preached his new doctrine at Sarnath near Benares. Magadha was the centre of Buddhism and it remained till the end of the 12th century, i.e., from the time of Bimbisāra to that of Govindapāla, though the centre shifted from time to time as has been pointed out by R. Kimura[1] (1) Magadha, (2) Central India (Madhya Deśa)—Kosambi, Mathurā Avanti, (3) Andhra period Pathan, 232 B.C. to 1st century A.D. (4) Kashmir (Gāndhāra) 232 B.C. to 1st century A.D. (5) Kosala, 2nd and 3rd century A.D. (6) Ayodhyā, period 4th to 5th century (7) Nālanda, period 5th to 10th century, (8) Uddanta-Vikramaśilā, period 10th to 12th century.

When Yuang Chwang visited India Nālandā was at the zenith of its glory. Traditions of Nalanda still enchant the mind of Hindu India. Yuang Chwang left India in 645, Harsha died in 648. Then followed a Nepalese invasion. I'Tsing was at Nalanda in 685. Then followed anarchy which was terminated by Gopāla who ascended the throne of Vanga about 740 A.D. From 685 to 740 we do not know what had happened in India. Probably it was a bolt from the blue, Nalanda was destroyed. This is a dark period in Indian history. The Nepalese had invaded India but there is no mention that they destroyed the Nālanda monastery. The Arabs were in Sindh in 712, but there is no evidence that they came to Magadha. Sten Konow has ventured a guess that there was an incursion of the Goths in India. But he does not give (possibly he can not give) the definite date. The Goths, the Vandals and the Huns destroyed the Roman

[1] R. Kimura—Shifting of the centre of Buddhism in India Cal. Univ.—Journal of the Dept. of Letters Vol. I, pp. 12-45

empire in the 5th century. The Huns invaded India at the same time, but they were expelled from India in 533 by Yasodharman Vikramāditya as the Mandasor inscription proves. In the Samba-Purāṇa, probably composed in the 10th century, there is reference to a Magian invasion of India. But so far there is no archaeological or numismatic evidence to support this Purānic tradition. Vandalistic spirit, however, is evident in the destruction of Nālanda. But who were these Vandals? Unless we come to know for certain as to how and by whom Nālandā was destroyed it will be difficult to account for the disappearance of Buddhism in India.

Nalanda still remains buried under the earth, the treasures of Indian Buddhism are in Tibetan and Chinese translations. The excavation of Nālandā and a minute study of Tibetan Tangur and Kangur as well as Chinese Mss can only help us to decipher the various causes which led to the decline of Buddhism in India.

But still we need not despair. We can trace some of the main causes which led to its decline and disappearance. Sir Alfred Lyall in his "Asiatic Studies" is astonished to find the absorbing and assimilating power of Hinduism. V. A. Smith also testifies to this remarkable trait of the Hindu mind. It is difficult to detect any foreign element in Hindu culture because of this peculiar feature.

A river is fed by a tributary and sometimes it branches off and falls into the sea. If Hinduism can be compared to a river, Buddhism branched off from Hinduism and served as a tributary in the end and broadened its outlook.

It reminds us of the function of the lymphatic gland in Physiology. If any poison enters into the finger there develops an abscess in the arm-pit. This abscess saves the whole body from the poison and then vanishes. So Buddhism appeared and disappeared. In every religion when corruption sets in, the reformers appear from time to time. In Christianity we find Luther, Calvin, Knox, Wesley, and Channing;

in Hinduism we have Buddha, Samkaracarya, Chaitanya, Ram Mohan Ray, Dayananda and Vivekananda.

Let us see when did the decline begin. With the rise of the Guptas and the revival of Neo-Hinduism began the decline of Buddhism. It flourished for sometime under Harsavardhana but with the destruction of Nalanda the decline became rapid. The Pala Kings of Magadha gave it a new lease of life when a batch of scholars went to Tibet from the monasteries of Odantapuri and Vikramasila and gave fresh stimulus to the Tibetan Buddhism. The great scholar Dipankar Srijnan (Atisha) went to Tibet in 1041. Muhammad Bakhtiyar destroyed Odantapuri and Vikramasila and defeated Indradyumnapala, the last Pala King of Magadha. Thus perished Buddhism in Bihar.

Now we have to face a question. How far persecution was responsible for the fall of Buddhism. Buddhism is a religion of love, of non resistance and of resignation. The description of the destruction of the Magadhan monasteries as given by Mohammedan historians betrays the painful fact how helpless and stoical were these clean-shaven Buddhist monks. If India in the 12th century had been Buddhist she would have succumbed to Islam at a single blow as China did under Kubla Khan. Turkistan, Balkh, Beluchistan, Afghanistan and Khotan were Buddhist countries and we know how in a few years they embraced Islam. This also happened to Java. India might have shared the same fate if her people in the 12th century were Buddhists. Fortunately, it was Hindu India and she was not conquered at Tarain. The crescent had to fight inch by inch for full four centuries to bring India under the Moslem yoke.

Hinduism has seldom resorted to persecution for the sake of faith. Buddhism has seldom been persecuting. The reasons are not far to seek. Rudolph Von Ihering in his "Evolution of the Aryan" has pointed out how monotheism is persecuting while polytheism is not. One who believes in many gods does not mind if there is a fresh addition, while

monotheism will never tolerate the existence of a second god. So Javeh is a jealous god. The old Testament is devoted to worship of Javeh, so the Christians in spite of the 'Sermon of the Mount' imbibed this persecuting spirit of Javeh. The Arab and the Jews belong to the semetic race. Mohammad borrowed freely from Jewish mythology so the persecuting spirit of Javeh entered into Islamic faith.

There is doubt if Buddhism ever resorted to persecution. In the Ceylonese chronicles we find that Priyadarsi Asoka deprived the Brahmans of their property. Some words of Rupnath, Sasram and Barat edicts have yet to be explained. Many a scholar take these words to mean that Asoka betrays his hatred towards the Brahmans. There has been much bloodshed for the sake of religious differences. Even in Vaisnavism, the religion of love—we find a class called Vira Vaisnab who fought with the Vira Saivas. In the Deccan there was constant fighting among the Jainas the Vaisnabs and the Saivas. King Ajayadeva of Gujarat was a persecutor. But we do not hear of a persecuting Buddhist king. It is quite possible that the Buddhist had preference for Buddhist but that is a human weakness.

The Buddhists were persecuted by Mihiragula. The Buddhists of Kashmir had to suffer much from the persecution of the Hunas, and of the Mohammedans.

Rhys Davids has tried to prove that the Buddhists were not persecuted. But we have some positive facts against this point of view. Sasanka the king of Bengal wanted to destroy Buddhism and uprooted the Bodhi tree of Gaya and destroyed a number of monasteries. He was however defeated by Harsavardhan, so the persecution of Buddhism was checked. In "Sankara Digvijaya" we come across the name of king Sudhanwā who lent his sword to Sankara to destroy Buddhism. But "Sankara Digvijaya" was written in the 15th century and we have no historic evidence to prove the existence of Suddhanwā. Sankara took his stand

on the dialectic ground and vanquished all his rivals. We do not know if he had to take to the sword to defeat the Buddhist monks.

There is little doubt that Buddhism in Kashmir, Bihar, Bengal and Orissa had to face the onslaught of Islam and she could not possibly hold her own. But persecution is not the main cause of her fall.

In the 7th and 8th centuries appeared Kumārila and Śaṅkara. Kumārila is said to have been the preceptor as well as the disciple of Dharmakīrti though Kern is not prepared to accept this view. That Dharmakīrti was the principal of the Nalandā University and was a scholar of all-India reputation. He was beaten by Kumārila, so he became Kumārila's disciple incognito. Then he challenged Kumārila and defeated him. The immolation of Kumārila in slow fire is a mystery. In the *Śaṅkaradigvijaya* we come across an expression as to how Kumārila has killed all the Jina elephants to re-establish Vedic religion. This may not mean persecution of the Buddhists. It is not possible and proper to establish a historical truth on the basis of this metaphor. All this indicates that Kumārila had a tough fight with the Buddhists and sometimes he had to meet defeat at their hands.

Then came Śaṅkarācharyya. Ramanuja has called Śaṅkara "a Buddhist in disguise." There is some truth in the statement. Śaṅkara was the disciple of Gouḍapāda, who was again, the disciple of Gauḍapāda who was the disciple of a Buddhist. Śaṅkara was a keen student of the Madhyamika School and he found a flaw in that system. Nothing indicates the existence of something. That is a relative term. The 'Śunya Vāda' of Madhyamika School insisted that everything is void. Śaṅkara said that one may have to grope in the dark and say 'This is not, that is not', but there is something positive and that is Brahma. This is the fundamental basis of the *Advaitavāda*.

Many a Buddhist term has crept into Hindu philosophy. 'Dwipadāṅgbarāṅg' is a Buddhist term, Sambṛti (Māyā)

and Paramārtha (Brahma) are Buddhist terms and they have found their place in Hindu philosophy. Because Śaṅkara was a great scholar in Buddhist dialectics so he was in a position to defeat them so easily. So we find in his commentary to Brahma Sutras so many Buddhistic terms.

Śaṅkara with his *Advaitavāda* dislodged Buddhism from its place. But to win over the Buddhists he had to yield and strike a compromise. We have reason to doubt if monastic life existed before the advent of Buddhism. It appears to have been a Buddhist innovation. *Isaac* Taylor in his "Ancient Christianity" maintains that knowledge of Indian Monasticism was possessed by Clement of Alexandria and thus he traces the origin of Christian monasticism to that of India.

In the Vedic religion there was no room for celibate monks. Sacrifices could not be performed without a wife. So the Vedic religion was for the married house-holders. After Śaṅkara's reform, the Buddhist house-holders accepted the Vedic rituals. As for Bhikṣu, Kṣapaṇaka and Śramaṇa he gave them a new Hindu label. It was a diplomatic move and thus ensured Śaṅkara's success. It reminds us of the methods of the Jesuit fathers in China or the missionaries of Nestorian Christianity in Southern India.

Thus we see how the sword of Mihiragula Śaśāṅka and Muhammad Bakhtyar as well as the triumph of Kumārila and Śaṅkara in the intellectual platform weakened, if not destroyed, Buddhism in northern India. But these are external causes. Let us now enquire into the internal affairs of Buddhism.

The soul of Buddhism was in the Saṅgha (monastery). This monastic system was an invention of Gautama Buddha. Its organisation was democratic and Mr. Jayaswal[1] has tried to prove that the Vṛijian republics were formed on the model of the monastic system of Government. With Buddha Dharma and Saṅgha also received its due worship from the

[1]Modern Review 1913.

votaries. As long as monastic life was pure, Buddhism was pure and it won the sympathy and support of the people. But corruptions began to creep into the monastery and Buddhism also became corrupt and thus it began to lose its hold upon the people. Free contact of monks and nuns in the monastery was at the root of all corruptions, and this ate away the very vitals of Buddhism. Buddha was right in refusing the admission of women in the monastery. He knew the human weakness and could foresee what would happen. When Ānanda, his pet disciple, implored him to ordain Mahāprajāpatī Gotamī and her followers Buddha said[1] "Ānanda, you have curtailed the life of *Saddharma* by five hundreds years". But still he could not resist the tears of his step mother and the request of Ānanda. This prophecy proved literally correct in the long run.

If we study *Bhikṣuprātimokṣa* and *Bhikṣuṇīprātimokṣa*, Mahāvagga and Chullavagga we can see the corruptions of monastic life.

Prātimokṣa is a part of *Vinaya*, probably composed after the *Vibhanga*. The monks and nuns commit crimes after crimes. Buddha censures them mildly and frames rules for their future guidance. In the Pratimokṣa we find the rules of discipline for monastic life. These rules are nothing but those of Brahmacharya, Vānaprastha and Yati or Sannyāsa of Vedic Varṇāśrama. The Jain monks also follow the same code. Pandit Vishwanāthā Shastri[2] has proved this beyond doubt. We need not go into details. In Vedic religion there is no subordination or the need of Ācārya and apparently, there was no necessity for the same. In the Vedic religion Vānaprastha commences after the 50th year and Yati after the 70th. But in Budhism one could be ordained as a Sannyāsī at 20. This bears comparison with Naishṭhik Brahmachārī and Dānḍī.

The description of the origin of the foundation of

[1] Cullavagga X-1 Kern—p 31
[2] Introduction to Bhikṣu Prātimokṣa and Bhikṣunī Prātimokṣa

monastery we find in cullavagga (6-1 1-2). The Bhikshus lived under the trees in the forests, in the caves of hills, in cremation ground, in open ground and in Palala Kunja. The green grass was their bed and the blue sky was their canopy. A rich merchant of Rājgriha was deeply moved at this and he wished to build a monastery and Buddha ruled that there should be five kinds of houses for the Bhikshus-Bihar, Addhyayoga, Prasad, Harmmya, and Guhā. Thus the Bhikshus began to live in beautiful buildings. There was no such provision for *Sannyasis* in Vedic religion. It is a peculiar development in Buddhism.

The Vedic rishis had preached about this Bhikshu cult before the rise of Buddhism. But nobody built monasteries for those Bhikshus. So Vedic Sannyasis had little connection with the house-holders and they seldom depended upon them. So they could afford to ignore public opinion. Buddha, however, had to humour public opinion as he had to look after the interests of the Samgha. As the house-holders formed one class, so did the Bhikshus and in course of time there grew up mutual co-operation between the two classes and in the end the Bhikshus had to depend for their maintenance upon the house holders. So Buddha had to frame rules acceptable to the society at large. He could not afford to ignore public opinion.

The Prātimoksa was to be recited on the Uposath day in the Samgha and its obvious object was to inculcate moral principles, so that the monks and the nuns might lead correct life. Uposatha comes from Sanskrit Upovasatha. In the Vedas we get Darsa and Pūrnnamāsa, sacrifices, that is, the rituals on the new moon and full moon days. The day before that is the day of *sanyama* and thus is called Upobasath. In Satapatha Brāhmana (1-1. 1 7) it is said that the gods live in company of the Yajamāna on the day previous to the day in which the Yajna will be performed. So this day is called Upobasatha. The Jainapanthis followed the Vedapanthas in the practice of Upobasatha and even they follow

it now. According to Buddha's orders they had to observe Upoyasatha on the 14th and 15th day to read the Prātimokṣa on the same day.

In Prātimokṣa Suttavibhanga and Cullavagga we see how corruptions were rampant in the monastery. The rules in Prātimokṣa are negative. "Do not this or that" this is the main argument. The monks and nuns commit sin after sin and rules are framed to check it. To trace the origin of a rule we find in the Vibhangas so many anecdotes. All of them may not be true but still the rules indicate that some such incident must have happened otherwise there would not have arisen the necessity of a ruling, though sometimes it happens that a rule is framed in anticipation of future breach. But there are some rules in Bhikṣuṇī-prātimokṣa (2-5) which no one possible can foresee. So there must have occurred some event which led to the framing of a particular rule. We cannot disbelieve all the anecdotes in the Suttavibhanga. So it appears that chastity as ordained by Buddha had gone to the dogs. The nuns are engaged in washing clothes and cooking rice as ordinary maid-servants. They are often busy in their elaborate toilet and they often work as shop-keepers. The monks also shared the same fate and were dragged down to the level of the nuns. Buddha tried his level best to separate the monks and the nuns, but he failed.

The corruptions of Bhikṣuṇīs were gradually on the increase and in Sanskrit works we get positive proof. In illicit love an intermediary is necessary. Generally a Bhikṣuṇī served as an agent to arranging liaisons. In Vātsyāyana sutra we find Bhikṣuṇī, Śramaṇa and Kṣapanera as the best agents for the meeting of lovers. In Malati Mādhava we find how Kamandaki, Avalokitā and Buddha-Rakṣita forgot their duties as sacred nuns and were busy as stealthily arranging a marriage. Because such were common occurrences of the time so Bhavabhuti introduced them in his drama.

The illustrations will suffice to prove that Buddha was justified in refusing the admission of women in monastic order. The Bhikṣuṇis of Buddhist monasteries, the nuns of mediaeval Christian monasteries and Nedis or the women in the Sahajiā cult of later Vaiṣṇavism in Bengal demonstrate the sad truth that free mixture of men and women even in religious orders is seldom conducive to healthy moral life.

Let us turn to another aspect. About the time of Luther one third of Europe belonged to the church. The Roman catholic priests were too busy in the management of church property and could hardly afford to spare any time for religious duties. In modern times we see how the Pandās and the Mohantas lead their lives in India. The Buddhist monks also were of the same type. These monks, owners of big property, and lords of a large number of retainers—often meddled in political intrigues. They often helped the Buddhist kings against the Hindu kings. There is reason to believe that at the bottom of Śaśanka's hatred towards the Buddhists, there might have been some conspiracy of the Buddhist Saṅghas against the ruler of Pauṇḍravardhana. When they had power they could not possibly resist the temptation to abuse it.

Thus the Saṅghas lost its moral force and with it the sympathy and support of the people. The final blow was dealt by the Mohammadans who destroyed these monasteries and burnt the books. Thus the Nemesis overtook them in the 12th century. With the Saṅghas fell the main prop of Buddhism.

We ought to remember another aspect. If we study the condition of Navadvīpa in Bengal before the coming of Caitanya we find how the intellectuals abused their gifts in useless discussions. In Europe also we find the schoolmen, the sophists, and the gymnosophists abusing their powers in argument certain sectores. Such contest often ended in blows. Recent happenings in Kumbha Mela will

illustrate the militant spirit of some of the sangyāns. Rockhill has translated from Tibetan a short account of the history of Khotan, a Buddhist land[1]

"Durdharsa, the king of Khoten to atone for all his sins invited from Pāṭaliputra a Bhikṣu named Sirsaka who asked him to entertain all the Bhikṣus throughout 'Jambudvipa'. On the night of the 15th the Bhikṣus assembled for confession and they called upon Sirsaka to repeat the Prātimokṣa Sutra. But he answered them "What can the Prātimokṣa do for you? What is the good of a looking glass for a man whose nose and ears are cut off?" Then an arhat called Surata arose and cried with a lion's voice: "Bhikṣu Sirsaka, Why speak you thus? I am whole as the Sugata ordained" Then the Bhikṣu Sirsaka was filled with shame but Agnāri the disciple of Sirsaka said to the Arhat 'How dare you speak thus to such an exalted personage as my master?'" Thus enraged he seized a door bar with both hands and killed the Arhat Karnatha, the Arhat's disciple seeing his master killed, inflamed with anger, took a stick and with it killed the Bhikṣu Sirsaka All the Bhikṣu became enraged and dividing into two camps they killed each other." Such were common occurrences. Thus we see how the religion of love had degenerated

I shall quote another instance from the same source[2]. "Now when the Bhikṣus reached the land of Gandhāra they stayed there for 2 years. In the 3rd year the believing king died and his kingdom was divided between two sons One was a believer and other the follower of Tripiṭakas and they waged war against each other. Then a thousand bold resolute Śramaṇeras attacked the unbelieving king and his army, defeated him and gave the throne to the believing prince. After a reign of 5 months the prince was murdered by the 1,000 Śramaṇeras and one of the Bhikṣus was made

[1] Rockhill *Life of Buddha* p 244
[2] Ibid p. 245.

king and ruled for two years. At the end of this time the nobles and peoples took up arms, put the king to death and killed all the Bhikṣus living in Gāndhāra, and those who fled to mid-India alone were saved."

It is clear from the above statement that like the Jesuits the Bhikṣus meddled in party politics. They fought like Pope Julian II and there were plenty of assassins like Ravaillacs and Clements in the holy orders.

In the later Mahāyāna Buddhism there had developed the cults of Mantrayāna, Vajrayāna and Kālachakrayāna and many scholars are of opinion that the tantras originated with the Buddhists and it was these Tantric orgies which brought about the fall of Buddhism in India.

The very word Tantra is a bugbear to us. Hodgson, Dr. R. L. Mitra and Waddell received the greatest shock in their lives when reading the Tantras and we agreed with them. But with the publications of the Tantras and their beautiful esoteric explanations[11] by Pandit Shiv Chandra Vidyārnava and[12] Sir John Woodroffe the pendulum has swung from one end to the other. We are in raptures now over the beauty of the Tantras. On one side we have the detractors and on the other the advocates and apologists. Let us see if we can make a proper estimate of the Tantras.

"Ritual is an art, an art of religion. Art is the outward material expression of ideas intellectually held and emotionally felt. It is a matter of experience. Those who speak of the Tantras as nothing but mummery, gibberish and superstition often betray their incapacity and ignorance.

Man as a social being can not possibly ignore social customs and conventions. If we give up one form we have to accept another. Conventions remain, only the forms change.

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[11] Principles of Tantrism.
[12] Mahānirvāṇa Tantra and other works.
[13] Arthur Avalon: Shakti and Śākta.

Manu says 'whoever does not obey the customs becomes an object of censure' (4|-|157) It is not only in the Vedic countries but in all countries. These customs and conventions do not obey the dictates of reason Their object is to put some restraint to the license in man. After all, one cannot afford to ignore the *sciva*. Buddhism though a revolt against the Vedic rituals became full of rituals. How punctilious they were can be found if we carefully study the proceedings of the second Buddhist council held at Vaiśāli. Tantra also is full of rituals. Now we shall have to see how far these rituals helped the decline of Buddhism.

Tantra belongs to Āgama and its peculiarity lies in the fact that it is open to all castes and both sexes and is not subject to the restriction of Vedic religion, which is only for the twice born. Āgama is of two kinds Vedic Āgama and non-vedic Āgama. Tantras are of three kinds Śākta, Śaiva and Vaiṣṇava.

The philosophy of Āgama is a practical philosophy Both in India and Tibet the Tantras lay down principles which are of universal application.

Now Buddhism which in its origin has been represented to be a reaction against excessive and barren ritualism could not rest with a mere statement of the noble truths and the eightfold path. Something practical was needed. So the Mahāyāna developed in the second century A.D. and Nāgārjuna is said to have promulgated ideas to be found in the Tantras. Mahayāna gave a new shape to the Tantras In order to realise the desired end use was made of all the powers of man mental and physical Thus sprang up Yogācāra. The worship of Śaktis spread Thus Mantrayāna and Vajrayāna found acceptance Tāranath informs us that Tantrism existed and was transmitted in an occult manner in the period between Asanga and Dharmakirti, that is, between the sixth and the seventh centuries. He adds that during the reign of the Pāla dynasty there were many masters of magic—Mantravajradhryyas—who being possessed

of various 'Siddhas' performed the most prodigious feats.

Thus the so called Tantrik Buddhism became fully developed. The Kangyur contains in one of its sections Tantra (Rgyud) and the Tangyur also contains many Tantras.

In all religions some practical method and ritualis n necessary, otherwise it becomes barren of results In Puritanism we do not find provision for ordinary human needs. History cannot be written if we exclude from it what we do not personally like.

The 'Pañchamakāra' or five practices beginning with the word M is a great hindrance to us for understanding the Tantras. But these five M's did not originate with Buddhism They may be traced to the Vedas which were subsequently abandoned probably due to the influence of Jainism and Buddhism. The Soma represents 'madyam' (wine) an intoxicating beverage, meat was offered at 'Mānsasatakasradha' fish in Asvakashradha and Pratasrādha. Pundit R. S. Trivedi[24] points out that Mudrā of Pañchavya corresponds with Paredasha cake of the Soma and other sacrifice As for the fifth M, we can trace it in the well-known Vasudevyavasa and Mahāvrata. An esoteric meaning was suggested for these practices, but that was a later idea.

Original Buddhism began to decline after the death of Asoka and there was a Hindu revival under Pusyamitra In Hinayana there was no elaborate ritual which could capture the imagination of the multitude. The eight fold path and Nibbana gradually lost all its charm. Kanjka noticed this fact and invoked a council at Jalandhar In this council there were two great scholars Pārśva and Asvaghosha Then came Nāgārjuna and Aryadeva and Prajñāpāramitā became the Bible of Mahāyana, but it took Sanskrit as the medium of expression. Pāli Buddhism was shunted to a secondary place and was called Hinayana. This Hinayana remains the religion of Ceylon, Burma and Siam, while Mahāyāna spread in

[24] R. S. Trivedi Yajna-kalpa.

China, Tibet and Japan. Nāgārjuna is said to be the founder of the Mahāyāna system.

Nagarjuna was not only a scholar, he was a diplomat. He could see through and he knew how to sail close to the wind. He knew how to bring the Hindus within the fold of Buddhism. He accepted the Hindu Pantheon with some of its gods, rituals and sacrifices. The Buddha of Hīnayāna is a stoic and an on looker callous to the sufferings of humanity. His doctrine is that desire is at the root of all evils. If desire is nipped in the bud there will be no 'Karma' and without Karma there cannot be any re-birth and so one attains Nibbana. This doctrine is based upon reason. It appears to have been a beautiful intellectual somersault. The Buddha of Mahāyāna is on the other hand a kind deity and full of sympathy for suffering humanity. The grace of god —which is the main tenet in Christianity—now enters Buddhism and Buddha is not only divine but human as well. Bodhisattvas and Tārās began to multiply. The gods were allotted their goddesses. Two new systems of philosophy—Yogācāra and Madhyamaka—developed. Buddhist Tantras began to appear and it has been pointed out by Louis de la Vallee Poussin that the Buddhist tantras were divided into four classes Kriyā, Carya, Yoga and Anuttarayoga.

The horrid rituals practised by Aghora Kapālikas and the followers of Mantrayāna, Vajrayana Kālachakrayāna cannot but evoke disgust unless we are prepared to accept the esoteric significance behind such words. Arthur Avalon[28] is of opinion that the Tantric moral as practised in India from seventh century onwards was introduced from China. In the worship of Sakti, 'Jabā' (China-rose) is indispensible, so this Chinachāra was introduced in India through Nepal. In one of the Tantric books, 'Rudrayamalā' Vashishta is advised to proceed to Mahāchina near the Himalayas as nothing but '*Chināchāra*' could please her.

The Tantric cult was introduced into China by the In-

[28] Sakti and Sākta—pp. 114-115.

dian scholars—Amogha in the seventh century and by Subhakara in the eighth A Jesuit father L. Wriger—in his "Historie des croyances religieuses et des opinions philosophiques en Chine" has traced this development The Tantrikr were a fashionable sect in China, though they had nothing to do with 'Vāmāchāra' or 5th M. Geiger says of the Amoghites "leur morale est sévère, leur vie très austère". They were men of strict morals and their life was austere

It is quite possible that it became corrupted on its way back to India via Tibet and Nepal and these accretions might have been called 'Chunachāra' So the Tārātantra was founded by the side of the Himālayas (Kamākhyā or Kāmrup in Assam is still the citadel of the Tantrik cults) And Kulabhairava Buddha began to be worshipped as Bhairava in the Sākta cult.

So we see that the Tantras did not originate with Mahāyāna Buddhism and even the scaring 'Pancharatrva' is as old as the Vedas. If Buddhism is corrupted by anything it was by this repulsive 'Chunāchāra' It is quite possible to admit that behind these obviously hideous practices there was an esoteric meaning They are not what they appear to be and some of its followers were, and even today are, men of austere morals. But there is little doubt that most of these Tantrikr were shameless hypocrites who under the cover of religious practices indulged in all sorts of bestly sensual pleasures. And Sankara and his followers only voiced the sentiment of millions of people who were groaning under these Tantrikr But Sankara's relation with the Tantras deserves careful consideration There is reason to believe that he was a devotee of the 'Sri' cult which is a Tāntrik cult. We do not know if Srinagar in Kashmir and Gharwal were cities of the Sri cult. 'Srichakra' means Universe This Sri vidya further developed into Lakta cult of Nepal Sankara's 'Saundaryalahari' helps us to understand this aspect. Sankara as an austere moralist, fought against the hideous and gruesome rituals which were practised in the

name of the sacred Tantras, and he championed the cause of the moralists against the Tāntrikas. When Buddhism perished in India it had lost all its claim over the sympathy and support of the people.

S. N. BHATTACHARYYA

THE RELIGIOUS QUEST

The Problem of Religion

The one indisputable truth which Comparative Religion has unearthed of late is the thorough-going relativity of the religious conceptions, rites, institutions and customs. As a consequence, critical reflection has long replaced the child-like simplicity with which the primitive mind acquiesced in the religious practices and dogmas of its age and community; and the problem which clamours for a solution is not how a particular religion has come to be what it is, but whether it is what it claims to be. The latter problem, it will perhaps be granted by all but the confirmed sceptic, is entirely distinct from the problem of tracing the genealogy of a given religious system. Thus, for example, we may be told how Hinduism, as it exists now, is the result of a long line of development which has passed through a number of ascertainable stages from the time of the Vedic sages with their henotheistic and animistic attitude to the twentieth century with its eclectic tendencies and multitudinous sects some of which are as distant from one another as the north from the south pole, yet all claiming to represent the essence of Hinduism. And as a matter of historical origin, it is not impossible that the old Indo-Aryan culture was seriously influenced by factors that were not purely of indigenous origin though Hinduism has in the main pursued the policy of religious isolation to a degree which is almost unparalleled in the history of any other religion in the world. In the opinion of many distinguished workers in the domain of anthropology, the Indian scripts, the incantations and sorcery of the Atharvaveda, the belief in auspicious and inauspicious days and a number of other primitive practices and religious rites point strongly to the influence of Babylonian culture on early Hinduism; while the remarkable coincidences between the Rigveda and

the Avesta have led many to accept the conjecture of an intimate relationship between the early Indo-Aryan culture and the Iranian cult of ancient Persia.

Or, again, the method of studying the growth and changes in the religious conceptions and practices by tracing them back to their sources in different cultures and external influences may be supplemented by an internal study of the physical and moral environments of the peoples among whom they flourished. In that case, the coincidence as well the divergence of different cultures will be explained, not so much by the hypothesis of mutual relationship or influence as by reference to the similarity and difference existing in their respective physical, social or political conditions. Thus, the religious outlook of a people living mainly on agriculture, for example, may be found to be essentially different from that of another among whom hunting is the main occupation. The Eskimos of Greenland and Alaska, feeding on seal blubber will invest the qualities of strength and adventure with a religious significance and imagine a land of plenty in the sky to which only those who die by accident or by violence can find a ready entrance. On the other hand, the Samoans of Polynesia believe that the souls of those who die by such accidents as drowning and who consequently cannot be buried must linger about their old haunts. Similarly, the dialogue between Zoroaster and Ahura Mazda indicates the profound influence of environment on the origin and growth of religious ideas. "What is the food that fills the religion of Mazda?" asks Zoroaster, to which Ahura Mazda replies: "It is sowing corn again and again, O Spitama Zarathustra. He who sows corn, sows righteousness." How far the political conditions can influence religious conceptions can be easily seen from the henotheistic modes of Egyptian religion. Ptah in the Old Empire, Neith in the Saitic period, or Amon under the Theban dynasty came to be regarded as the supreme God for no other reason than that they happened to be the name gods of the Pharaohs.

It is here that the conflicting conceptions of God in the history of the human race find an explanation. Regarded from the standpoint of origin, it is not God who has created man; rather it is man who has created his gods in his own image, though he may have ascribed to them powers and qualities which far excel those that are found in man. When the sophists preached that the gods existed not by nature but by art and by the laws of States, or when it was said, in a drama on Sisyphus, that gods should be invented in order to moralise men in respect of those secret sins which could not come under the law, or, again when Cotta asked if the doctrine of gods were not the invention of politicians, they may have exaggerated the truth the discovery of which is a distinct achievement of Comparative Religion. But they were perhaps essentially right in tracing the origin of the gods to human needs and social exigencies and to the influence of environment in general. It is now an established fact that gods have, as a rule, varied with the variation in the physical and moral surroundings of man. Thus, for instance, while the God of the Samoyedes is ever ready to reward a man who commits suicide by strangulation, the "Father of Life" of the Dacoutahs is positively offended when any person dies by hanging himself, and so the women have to select the smallest tree for hanging themselves lest it should be too heavy for dragging in the land of spirits. Similarly, while the gods of the Ainu in Japan grow angry with one who abstains from wine, and while drunkenness forms an important part of the religious festivals and ceremonies of many peoples, the followers of Islam would regard it as a most mortal offence against God. Again, the gods are either malevolent or benevolent, either bloodthirsty or averse to bloodshed. The savage executioners of the Iroquois would slay the victim so that Areskoi may eat flesh and bestow on them luck in return, the high priest of Mexico would tear forth the heart of the victim and place it in the mouth of his god with a spoon just after the sacrifice so that god may

drink the fresh blood and flesh of men. But the gods of some American Indians are so averse to human flesh and blood that before a man can be put to death he must be forced out of their "ancient, holy, or white towns," or the "medicine lodge." Similarly God said to David, "Thou shall not build a house for my name, because thou hast been a man of war, and hast shed blood."

These conflicts in the conception of God which arise from the varying nature of the social, political or economic needs of the people have to be accepted as positive facts by every serious enquirer into the meaning and significance of Religion in human life. And when we look dispassionately at the history of the conception of God, it has to be acknowledged that this conception, like all other notions and beliefs, has passed through a number of stages, and it has changed with the changes in the customs and usages of different people. From the All-Father belief of the Australian tribes with its esoteric secrets carefully concealed from women and uninitiated white men to the so-called developed notions of *ens realissimum* or *perfectissimum* and God as the Ideal partly transcendent and partly immanent, there is the entire history of humanity with its changes and vicissitudes and an ever-shifting psycho-physical framework. And the problem which this fact of change forces on the reflective mind is, Which of these Gods is the fittest object of worship and devotion? How can it be ascertained whether that particular God whom I am expected to propitiate either through prayers or offerings is not after all a devil in disguise? The Chandika Devi can be gratified for a thousand years only, when she is offered human flesh and blood, while Bhairava is pleased to extend the period to three thousand years; the Athenians had to sacrifice the daughters of Hyacinthus in order to appease the divine wrath which was responsible for famine and pestilence; sometimes, again, the god himself provides the spear with which the devotee may perform the sacrifice, and sometimes he dictates the actual method which

should be adopted at the time of immolation. The most interesting fact, however, is that the religious sentiment has been satisfied as much by these gods who make more or less exacting demands on the devotees as by such other gods as Mukasa of the Baganda who positively refuse human sacrifice. And God's ways have historically been inscrutable not so much in the sense that they transcend human intelligence as that they are full of inconsistencies and incongruities.

Thus the craving of the human mind for an object of love and homage, or of fear and reverence, has been historically satisfied in directions that are not only different from each other, but altogether conflicting and mutually inconsistent. If, however, these conceptions of God are inconsistent with each other, the Buddhistic conception of the Divine destroys the last ray of hope for arriving at a unitary notion of God on the basis of the historical religions. The Hinayana school of Buddhism would not recognise the right of any God to claim superiority to the historical Buddha. It is not Gaurama who is expected to pay homage to God, rather the gods approach him with garlands and flowers, and accept him as their teacher in matters of truth and morality. It is not again the gods who lay claim to omniscience and omnipotence and whatever power or knowledge they possess sink into insignificance when judged in the light of the perfect wisdom possessed by Sakyamuni. But the supreme place which Sakyamuni held in the religious system of the Hinayana schools had only a sectarian sanction behind it, and as such, would not be acceptable to the followers of the Mahayana school who placed the historical Buddha in a celestial hierarchy comprising innumerable Buddhas beginning with Amitabha who alone is the highest object of worship and adoration. Sometimes again, as in the Buddhism of Japan, the Amitabha Buddha shines, not so much by his own light, as by the borrowed light of the Dharmakaya who manifested himself in Amitabha. Thus in the history of Buddhism, there is a remarkable change in the relation of man and God,

and as the man is defied the gods are humanized, though the religious carving is as much satisfied in the divine man of Buddhism as in the supra human gods of other religions.

Need for Rational Scrutiny

It is needless to multiply examples from the religious systems of the world in order to prove the entirely chaotic nature of man's religious beliefs and practices. It is, however, evident even from the short outline that, regarded historically, God defies definition, not because He is realised in the supra-rational religious throbbings of the heart, but because the human heart has throbbed so discordantly, nay, the sound of one throb has been so entirely out of harmony with that of another that it is well nigh impossible to discriminate the voice of God from the boisterous pranks of the devil. The all-important question in Religion, therefore, presses itself for solution, which, as we have ventured to suggest above, is not how a given religious conception or practice has come to be what it is but whether it is what it claims to be. When every religion claims to enjoy a supernatural or ultrarational authority, and thus throttles the inquisitive voice, the only remedy is to refuse to accept the so-called supernatural authority and submit the religious beliefs to a careful scrutiny, no matter how long they have remained entrenched within the strong citadel of feelings and emotions and how hoary the antiquity from which they derive their sacred authority.

But the proposal to overhaul all religious beliefs and rites, it may be retorted, is as impossible as it is audacious. For does not every religion agree in putting a ban on secular faculties of knowledge, and does not the proposal set at nought this universal warning of all religions? The answer is very simple, though the warning and the question are as old as the Egyptian Book of the Dead, or the Indian Vedas. If the secular faculties are to be limited to a particular type of objects and experience,-these limitations are to be fixed either by the secular faculties themselves or by a

different faculty. In the former case, the secular canons of proof are accepted as universally valid; and as a matter of history, the high priests of the Christian Church as well as those of the Hindu Religion have unconsciously relied upon the secular instruments of knowledge for *proving* the incapacity or ordinary means of demonstration. When, on the other hand, it is claimed that the limitations are proved by the disparity which is sure to be exhibited by every attempt to reduce the divine utterances to the laws of rational thought, what is not clearly seen is that even here it is the rational thought which decides the issue. Reasoning is involved in antinomies in matters of fundamental or ultimate problems, and it is this which is made the ground of the proof; and so it is ultimately the fact of *disparity* or *contradictions* which are appealed to in proof of the incapacity of rational thinking. That is, the ground for limiting the thinking faculty here is that the deliverances of the ultra rational faculty are *inconsistent* with the conclusions of secular knowledge. Thus, it is ultimately the law of consistency which is admittedly the law of secular thinking that is depended on in proof of its own limitations.

The fact is that every assertion, either affirmative or negative, claims to be true, and thus it implicitly denies the truth of the assertions which contradict itself. This distinction between the true and the false together with all that is implied in the distinction can be rejected only through a confusion of thought. In this connection the remarks of Principal Caird who has been characterised by Green as an eminent Scottish theologian and a most powerful preacher and teacher, and whose "strong grasp of ethical and religious experience" has been admired by E. Caird, have a permanent value. "It is then virtually a contradiction in terms to say that a revelation of what is contrary to reason should be received as true. But the content of a revelation, it may be said, though not contrary to reason may be above reason. And in point of fact this last is the

notion which, since the time of Leibnitz, has been the favourite apologetic device of ecclesiastical writers. Nothing can be accepted as revealed which contradicts reason, yet revelation may contain divine mysteries—doctrines which surpass the compass of human intelligence, but which, as not being inconsistent with other known truth, may be accepted on sufficient authority."[1] But this appeal to a higher reason in distinction from the finite reason, it is pointed out, is still a contradiction in terms, for, "where or how is the line of division to be drawn? How shall I know that any given doctrine belongs to the prohibited domain?" Hence, it is useless to refer to a higher reason than the finite, and when a doctrine is supposed to be "above reason", or "contrary to reason", it is after all the finite reason which makes this distinction. "What is above reason, in the sense implied in the alleged distinction is really what is contrary to reason. We know of no other reason than one, and what can never be brought into coherence with that reason is to us equivalent to the absurd or self-contradictory."[2]

As a matter of fact, the reference to an ultra-rational source of religious knowledge is not confined to one particular body of religious belief; on the contrary, mutually contradictory doctrines and practices have claimed an ultra-rational sanction, and it is entirely impossible to make sure that a given practice or custom is of divine origin, or that the followers of a particular religious rite are not sinners against the divine law. The Koran, for example, is God's own word transmitted to the Prophet in a state of inspiration or God-intoxication. Yet some of the fundamental religious customs enjoined by it are diametrically opposed to those sanctioned, say, by the Hindu Law-givers who trace the origin of their injunctions to the Vedas which, again, are not of human origin. Contradictions in the Scriptures sanction contradictory rites and thus breed mutual opposi-

[1] Principal Caird, *Philosophy of Religion*, p. 66.
[2] *Ibid.* p. 68.

tion, and in proportion to the religious fervour with which God's word is followed in practice the opposition gains in strength leading to all the tragic and calamitous scenes of modern India. Similarly, the Bible, according to "a scholar of unquestioned learning" preaching from "the pulpit of the University of Oxford", we are told by Principal J. E. Carpenter[3] "is none other than the voice of him that sitteth upon the throne. Every book of it, every chapter of it, every word of it, every syllable of it, every letter of it, is the direct utterance of the most High — faultless, unerring, supreme". And in view of the difference between Christianity on the one hand and Brahmanism, Buddhism, and Mohammedanism on the other, the latter are condemned as three chief false religions. It was, again, not only Egypt and Babylon that claimed divine origin for their rites and practices, but almost every religion, higher or lower, traces its laws and institutions to a non human source. If the code of Hammurabi comes from the great Sun god Shamash, it is Manibozho who has handed down the arts and crafts to the Algonquian Indians of North America, while the laws and arts of the Australian tribes have come direct from Nurrundere, Baiame or Bunjil.

Atomism in Religion is as untenable as in Philosophy

It is evident from these claims and counter-claims that while religion contents itself with an appeal to a forbidden region, beyond the scope of rational criticism or intellectual shifting, it may kill personal initiative under the pressure of conventions grown holy by reason of antiquity, but it proportionately fails to offer anything in the shape of real guidance in life. We may, no doubt, appreciate the spirit of toleration when it is declared that the existence of conflicting religious types and sects and creeds is not a matter for regret, for, each of the religious attitudes "being a syllable in human nature's total message, it takes the whole of us to

[3] Comparative Religion p. 61

spell the meaning out completely"[1] But if a god of battles "must be allowed to be the god for one kind of person, a god of peace and heaven and home, the god for another," there does not seem to be any justification why "destruction of the self" must be an element of religion in the case of the "peevish and jealous" while it must be excluded from the religion of the "good and sympathetic" That is, if individuals as such should be allowed to get to the "final consciousness" which may be called the God-consciousness, "by the channels which lie most open to their several temperaments" there can be absolutely no excuse for enjoining self-destruction on those who are peevish and jealous by temperament.

In fact, if religion be a matter of personal temperaments and individual likings and dislikings, one should require a wilder imagination than that which created the Babylonian, the Greek or the Vedic pantheon in order to satisfy the religious instinct of humanity at large, and it would be a matter of purely verbal difference whether the all comprehensive abode of such varied divinities should be called a pantheon rather than a pandemonium. Nominalism, whether in epistemology, or ethics or religion, must lead ultimately to disintegration of all settled institutions and beliefs by virtue of its fallacious logic If Religion be a "monumental chapter in the history of human egotism"[2] then its practical value for human life and society is bound to be more fatal and far reaching than egoism in ethics or scepticism in epistemology for the obvious reason that the religious beliefs embody the most prominent of social forces that shape the history of the world. Hence it is all the more necessary that true religion should be carefully lifted above the subjectivism of individual temperaments and idiosyncracies, so that it may reveal itself through Universal Reason or Intellect.

Indeed, W James's defence of individualism in religion

[1] William James, *Varieties of Religious Experience*, p. 487
[2] *Ibid*, p. 491

leaves no room for the difference between a false and a true religious belief or interpretation and consequently, all talks about the reform or development of religious customs and beliefs must be condemned as a sacrilege. And he, far from denouncing this religious atmosphere which leads to such sceptical consequences, takes it to be the essence of the religious attitude. The appeal to impersonality in the sphere of religion, he urges, is shallow, for "so long as we deal with the cosmic and the general, we deal only with the symbol of reality, but as soon as we deal with private and personal phenomena as such, we deal with realities in the completest sense of the term."[10] And as our private experience and unshareable personal feelings are concrete realities as distinct from what abstract science yields, he is "bent on rehabilitating the element of feeling in religion and subordinating its intellectual part."[11] Yet, James is equally anxious to see that "Religion must be considered vindicated in a certain way from the attacks of her critics." And while agreeing with Prof. Leuba in holding that God is not known, he is not understood, he is used—sometimes as meat-purveyor, sometimes as moral support, sometimes as friend, sometimes as an object of love, he yet thinks it necessary to "pass beyond the point of view of merely subjective utility and make enquiry into the intellectual content itself." That is, from the first standpoint, the questions about the reality and existence of God are "irrelevant,"[12] but from the second standpoint, the important question to distinguish between "the subjective way of feeling thing" and the "objective 'truth' of their content."[13] Similarly while from the former standpoint he guarantees the reality of both the god of peace as well as the god of battles, from the latter standpoint he admits that the conflicting and "warring gods and formulas of the various religions do indeed cancel each other."

[10] *Ibid*, p. 496
[11] *Ibid*, p. 501
[12] *Ibid*, p. 507.
[13] *Ibid*, p. 509.

Such vacillations as have been illustrated above characterise James's description of religious creeds at every step, and they are ultimately traceable to his evidently ineffectual attempt to save Religion from the freezing touch of rational criticism. In fact, however, none can "vindicate" that which is *ex hypothesi* beyond the limits of intellectual exploration for, vindication or proof presupposes that the object is not essentially opposed to the laws of thinking or the principles of intellect. The result is that James, like all other apologists who have tried to save the prestige of irrational faith by *proving* the limitations of human faculties, has constantly, though unconsciously, to depend upon the laws of that same intellect the authority of which he is anxious to restrain. Thus, every death blow to reason generates an elixir of life which defies the deadliest weapon that was ever deposited in the armoury of blind faith. The clearest lesson of history is that all attempts to emphasise the dualism between reason and faith have been, as they are bound to be, unsuccessful. When the mystic monk of St Victor, for example, rejects the absolute claim of orthodoxy and yet holds that God exists only for faith, or when Richard, the illustrious disciple of Hugo, complains that though there is an abundance of authorities on the doctrine of Trinity yet there is an extreme dearth of arguments, proofs, and reason, while at the same time holding that God cannot be reached by the powers of reasoning and so feeling but to be recommended in place of reflection, or, again, when Shankara condemns the logician's method of reaching the highest reality, while himself displaying the subtlest dialectical art in defending his own interpretation of the scriptural texts, it is difficult to say whether they should be called mystics or rationalists. It is true that apparently the method of Abelard, for example, for whom an incomprehensible God is an impossible God, is diametrically opposed to the intuitional method of Hugo for whom God transcends all human conceptions But in his actual procedure, Hugo is not a whit less enthusias

tic than Abelard when there is an occasion for a rational defence of God.

Nobody can seriously deny that life is larger than logic, and that most of the beliefs which offer us guidance in practical life are not reached through logical processes, and in this sense they may be called over-beliefs. Nay, we may go further and admit that life would lose much of its value and charm if it had to be forced into the rigid framework of logic and dry analysis. But an over-belief, far from being the source of delight and happiness, may be the cause of mutual hatred and animosity and thus may render life unlivable and miserable. When such an over-belief claims to be truer than a rational faith, and forms an essential part of one's religion, it is difficult to find consolation in such a position as that "in our Father's house are many mansions, and each of us must discover for himself the kind of religion and the amount of sainthip which best comports with what he believes to be his powers and feels to be his truest mission and vocation."[*] Measured by the standard of over beliefs, every religion is as true and real as another, and thus in spite of the most deplorable and fatal difference existing between them.

The fact is that nothing is actually explained by the appeal to the irrational, and when our deepest beliefs and dearest institutions are justified in the light of the so-called limitations of human faculties of knowledge, they are really classed with false superstitions. For, once a given belief or custom is placed beyond the reach of rational scrutiny, its truth-value remains unimpeached despite all that reason could show to the contrary, and even the contradictions amongst different beliefs cannot derogate from their truth-claims and dignity. In other words, every irrational as well as ultra-rational dogma, if this attitude is to be adhered to, must be true in a way entirely inconceivable to our finite thought and finite faculties of proof. And with the aban-

[*] *Loc. cit.* p. 377.

dotment of all finite standards and finite valuations must be given up all attempts to discriminate the true from the false, the genuine from the spurious, the higher from the lower, or even the completer from the fragmentary. *Per contra*, if we are to distinguish the superstitious excrescences with which genuine religious creeds or usages may have been overlaid due perhaps to the influence of extraneous circumstances, it is a mere sophistry to argue that religious truths are above all finite standards, for, it is than in the light of our finite criterion alone that such distinctions are made and maintained.

Immediacy and Mediation in Religion

The remarks of McTaggart are so pertinent to the issue under consideration that we cannot avoid a reference to them at this place. "It is not uncommon", he observes," to hear the assertion that certain religious dogmas—the personality of God, for example, or the immortality of man or the freedom of the will—do not require proof. 'I am certain of this', some one will say, without argument. My conviction does not rest on argument, and cannot be shaken by it. I decline to argue I simply believe'" But this immediate conviction which is not reached through a process of mediation "is absolutely irrelevant if it is put forward as a reason to induce other people to believe the same dogma. This is sometimes done A man will assert his own immediate conviction of a dogma, not as a reason for checking discussion, but as his contribution to the discussion. And here it seems certain that he is wrong."[111]

Thus, for instance, when Al Ghazzali, the distinguished Persian theologian of the eleventh century, declares that the "transport which one attains by the method of the Sufis is like an immediate perception, as if one touched the objects with one's hands", and so a man who has no experience of the transport "may meanwhile be sure of its existence, both by experience and by what he hears the Sufis say," or when

[111] *Some Dogmas of Religion*, p. 59

Saint Teresa avers that during the 'union of union,' God establishes himself in the interior of this soul in such a way, that when she returns to herself, it is wholly impossible for her to doubt that she has been in God, and God in her; no man in his senses will question the actuality of such experiences as are described here. Nor is it possible to deny that these experiences come with an immediate certainty and force which is characteristic of every experience that is directly felt or lived. But the difficulty arises not from the fact that such experiences are natural, but from the actuality of some experiences which yet are found to be false. When the drunkard, for instance, sees rats coming through a solid wall, or when strange animals appear before the delirious brain there is an immediate conviction as strong as we have of the presence of the table before us. Similarly, the effects of hashish, alcohol or ether on man's beliefs have not only been enormous, but many intoxicating drugs are deliberately sought and used for bringing about communication with the Divine. The soma-juice among the worshippers in ancient India, alcohol among the protestants, ether among the Roman catholics, the snake plant among the Mexican tribes, toadstool among the Samoyeds, has been found very useful for divine communion.

When we add to this the truths discovered by Sigmund Freud an dother distinguished psycho-analysts, it becomes increasingly difficult to escape the ultimate authority of an immediate experience in matters of religion. The influence of repressed instincts on the origin of ecstatic trances is no more a hypothesis but an established truth. "The thesis which we shall maintain" says Prof. J. H. Leuba, "is that the delights said by our great mystics to transcend everything which the world and the senses can procure, involve some activity of the sexual organs . . . . and that the sex organs may be aroused to a considerable degree without the person becoming aware of their participation."[22] It does not matter whether

[22] *The Psychology of Religious Mysticism* p. 132.

the impulse be named a sexual impulse after Freud and Havelock Ellis, or merely instincts, only one of which is the sex-instinct proper as is urged by W. Stekel, Adler and McDougall, the influence of instincts on man's experience and beliefs is one of the valuable discoveries of psychological researches of the modern age. (Though the therapeutic method of Freud is at least as old as the story of the stepson of Semiramis, wife of the king of the Assyrians, the wide application of the method in curing different types of neuroses is due to the researches of the modern psycho analysts.) And the problem that is gradually forcing itself on the attention of all serious students of Religion is whether the ultimate court of appeal in respect of a given religious belief or dogma should be sought in the immediacy of a particular type of experience, or not. "The three interrelated problems" Prof. Leuba remarks, "to which the diary of Mlle Ve calls our attention are these.—Why does she regard her Experience as a manifestation of an impersonal, superhuman power? Why does she insist upon the divineness of that power? Why does she claim absolute certitude regarding her 'revelation'?"[13]

Similarly, W. James asks whether the mystic experiences "furnish any *warrant for the truth*" of the positions it favours. But James's answer to the important question suffers from that subjectivity and sceptical tinge which characterise his attitude everywhere. "As a matter of psychological fact," he concludes, "mystical states of a well-pronounced and emphatic sort *are* usually authoritative over those who have them . . . Our own more 'rational' beliefs are based on evidence exactly similar in nature to that which mystics quote for theirs. Our senses, namely, have assured us of certain states of fact, but mystical experiences are as direct perceptions of fact for those who have them as any sensations ever were for us"[14] Though however, the mystical experiences have an absolute authority over the mystics,

[13] *Loc. cit.* p. 220.
[14] *The Varieties of Religious Experience*, p. 423

yet, it is added, the "mystics have no right to claim that we ought to accept the deliverance of their peculiar experiences, if we are ourselves outsiders and feel no private call thereto."[21] It is difficult to imagine a more frivolous answer to a serious question. When the truth value of a belief or an experience is at issue, it is practically no answer to point out that somebody *has* that belief or experience. The very question, as a matter of fact, presupposes that the belief is entertained by some or that the experience is owned by certain persons; but this does not decide how far they are true or whether they refer to an objective reality. Even a hallucinatory rat in *delirium tremens* is believed to be real by the drunkard as much as the real rat of ordinary experience is believed by the sober mind. And it will be purely nonsensical to assert, on the basis of immediate experience, that the drunkard's rat is as real as the so-called real rat of the sober man. A little reflection will suffice to show that such an extremely subjectivist criterion of truth and reality is not only subversive of the religious life, but it is equally unworkable in practical life which rests on a common world of experience and a unity of purpose and aim.

Prof. Leuba's answer, on the other hand, has at least a scientific basis. The experiences of Mlle Vé, as is apparent from her descriptions, do not prove the reality of superhuman power or of divine presence. "Had she been more familiar with certain diseases, epilepsy for instance, with its aura of strange feelings and of disordered external perceptions, followed by a momentary loss of consciousness, she might have found it very difficult to speak of a divine power. But since, when reflecting upon her Experience, no comparable phenomenon such as would offer itself to the mind of a psychiatrist occurs to her; and since, instead, 'biblical expressions crowd' upon her mind 'in order to express or explain' that which she had experienced, she had but one alter-

[21] *Loc. cit.* p. 424.

native: the Power was either divine or satanic."[14] The reasoning of Mlle Vé, it is further remarked, "is common today to all those—among them are found distinguished theologians—who base their religious faith upon 'inner experience'."

That all these things happend to Mlle Vé is, of course, incontrovertible. But her claim of absolute certainty refers not to mental contents, but to the *objective reality* of an external power that is thought of as their cause or object: she claims absolute assurance of the existence of a transcendent, divine power." Thus while W. James's answer reduces itself to this, that God exists for those alone who have reasons to believe that He does exist, but God cannot exist for those who have no reason or experience to generate that belief, Prof. Leuba distinguishes, and we think rightly, between an immediate experience and its truth-claim or objective validity. The mere fact that a belief is entertained or generated does not prove its claim to be objectively valid.

From these considerations, however, it does not follow that every type of mystical experience may be adequately explained in the same way as the hysterical or the epileptic fits. But what does follow from them is that a number of mystical experiences which claim to prove the existence and reality of a different order of things are false and hence have no religious significance when considered as mere immediate experiences. And this shows the necessity of mediation in the sphere of religion quite as much as in the sphere of ordinary experiences. That is, the distinction between truth and error, the genuine and the spurious, is as necessary in the case of mystical experiences as in that of non-mystical ones, and it is through the mediating activity of thought that such distinctions have to be made in the long run. The really significant point is, as we have urged frequently, not whether a belief exists, but whether it is what it claims to be. The need for mediation has been so clearly

[14] Loc. cit. p. 254.

accentuated by Prof. Leuba that we must quote him once more before examining some other methods of avoiding intellectual criticisms in matters of religion. "If we reject the mystical claim," he observes, "even when it is limited as by Hocking, it is because the passage from sensations and feelings, whatever they may be, to the thought of 'God,' however understood, seems to us always an elaboration of the 'given.' To think of God—any kind of god—on the occasion of a sensory or affective experience, however unusual in intensity or quality, is to ascribe a cause to an intuitive, immediate experience. When the uncivilized hears God in the thunder, he is subject to the same illusion of immediacy as is the Christian who *feels* God in an influx of moral energy when in ecstasy or ordinary prayer."[101] Thus, the existence of God, for example, is not in reality revealed in the immediacy of the mystical experience, it is revealed, if at all, through the interpretation of that experience according to the category of causality, and consequently, the interpretation may either be true or false. It follows further that it is futile to decide on the truth-value of the interpretation by reference to the immediacy of that experience. An immediate experience, like the actually felt pain or pleasure, can only testify to its own existence, and is therefore absolutely devoid of a cognitive value, it is only when the experience is referred to something beyond itself that it is endowed with the epistemological meaning, such as is implied, for instance, in the assertion that God reveals Himself in the state of religious ecstasy.

It may now be easy to see how hollow are the common arguments that just as a man who is blind cannot have direct experience of colour, or that the deaf have no direct knowledge of sound, similarly he whose mystic sense has not been developed is incapable of realising the truths of religion. The plain defect in such arguments is that they confuse the immediacy of the experience with its claim to be true. A

[101] *Loc. cit.* p. 315.

feeling or a sensation, however intensely felt, reveals nothing beyond itself when regarded only as a felt fact. In this respect, a man born blind is infinitely superior to the more fortunate animal that enjoys the sense of sight but is altogether incapable of thinking. The former, in spite of his physical deficiency, does not rest satisfied with the mere "given," but refers it to its conditions and through a process of intellectual elaboration becomes master of his surroundings, while the latter, in the absence of noetic faculties remains throughout his life a creature of environment led by isolated and momentary impulses. The feeling that the animal feels has, no doubt, its conditions, but they do not exist *for* the merely feeling creature, and hence *sine* all the disadvantages of the animal life in comparison to the life of man. If then the superiority of man to animal consists in the possession by the former of the power of interpretation which the latter has not, it is surely time that we should realise clearly that the possession of an immediate sense, however peculiar and unique, does not make a particular mystic the member of a superior world or a divine order of things

Rudolf Otto's Defence of Immediacy

We have so far tried to justify the right of thought or mediation to encroach upon the forbidden region of religious beliefs and institutions, by showing that an immediate experience, in so far as it is purely immediate, has no cognitive value, and that all conclusions which are supposed to follow from an immediate feeling regarding God or divine influence or divine presence has in reality been derived not from the immediacy of the feeling but from inference drawn from the feeling. The only way, then, in which the truth-claim of religious experiences may be maintained, as has been argued above, is to admit the universal validity of the principles of thought without restricting them to a limited sphere of reality. A very commendable attempt, however, has been made of late to show that the state of religious experience is

not a state of mere immediacy, but it has a cognitive value though it is different from the method of rational valuation. Dr. Rudolph Otto stimulating work, *Das Heilige*, which is rightly regarded as one of the most important contributions to the religious literature of our time, is a sustained effort to dig out the non-rational element in every religious experience which cannot be translated in terms of any other experience. The holy, it is urged, is a peculiar category which is applicable to religious experiences alone, and it thus distinguishes the religious state of mind from the non-religious attitudes. In the state of solemn worship, for instance, there is, according to Otto, a unique and primary element which may be called creature-consciousness, or creature-feeling, that is irreducible to any other feeling or sentiment, such as gratitude, trust, love, reliance, etc. This creature-feeling "cannot be expressed by means of anything else, just because it is so primary and elementary a datum in our psychical life, and therefore only definable through itself."[18] Hence it should be carefully distinguished from all other natural emotions which may serve as analogies for this unique feeling, but cannot be identified with it. The holy, in this sense, is called a numinous category of value peculiar to the sphere of religion, through which alone should be interpreted the peculiarly religious and emotions.

"All ostensible explanations," Otto urges consequently, "of the origin of religion in terms of animism or magic or folk psychology are doomed from the outset to wander astray and miss the real goal of their inquiry, unless they recognise this fact of our nature—primary, unique, underivable from anything else—to be the basic factor and the basic impulse underlying the entire process of religious evolution."[19] Rather, the evolution of religion should be sought in a *mysterium tremendum, majestas, aspor*, or *fascination*, which are all peculiar elements or 'moments' of religious ex

[18] *The Idea of the Holy*, p. 9

[19] *Ibid*, p. 15.

personce. This numinous feeling, however, is not a mere immediacy, but has, according to Otto, a cognitive value, for, "the 'creature-feeling' is itself a first subjective concomitant and effect of another feeling-element, which casts it like a shadow, but which in itself indubitably has immediate and primary reference to an object outside the self."[24] Hence, again, the essential characteristic of religious experience, on all the levels of its development, is the presence of "a peculiar 'moment' of consciousness, to wit, the stupor before something wholly other whether such an other be named 'spirit' or 'demon' or 'deva,' or be left without any name."[25] This "wholly other," though entirely different from anything that we know, is a positive something which is grasped in religious experience alone. Hence the mystics call it the nothing or the void.

From this short sketch of Otto's contentions, it is evident that he is, on the one hand, anxious to emphasise a unique element in all religious experiences, and, on the other hand, he is equally anxious to insist on its cognitive value. These contentions, as is well known, form also the back-bone of mysticism. They are, if we may so put it, the perennial note in the mystical symphony of all ages and all countries. That the 'nothing' or the 'O' is but an "ideogram" which represents a positive reality beyond all thought and speech, that to describe it is to rationalise it away, have been the main teaching of St. Bonaventura and Eckhart, of Al'Farabi and Al Ghazzali, or, of Yagnavalkya and Shankara. So far as the numinous element of religious experience is concerned, therefore, we are persuaded to believe, Otto's analysis discovers nothing new, though it may be a challenge to the current accounts of religion according to which gods are either *libido*, or products of natural instincts and emotions such as admiration, fear, etc. Nevertheless, his originality consists in the use he has made of the numinous elements in cons-

[24] Do, p. 68.
[25] Do, p. 26

tructing a philosophy of religion which is not based entirely on conceptual thought. At the same time, he does not entirely deny to conceptual knowledge an important place in religion. Religion, according to him, should admit knowledge of "the transcendent in terms of conceptual thought." That is, though it is faith which yields the certainty of the numinous object, yet, religion should not discard conceptions. And here Otto's contention is evidently different from that of the mystics in general who have unanimously insisted on the incapacity and irrelevancy of conceptual thought in the sphere of religion. The merit of Otto's analysis, therefore, has to be judged not merely on the score of the numinous elements which he discovers in the varieties of religious experience. The truth of his position depends as much on the discovery or on the measure of success which he has attained in removing the dualism between the rational and the non-rational elements which for him are not only present in every religious experience, but must reside in all religions.

So far as the latter aspect of Otto's position is concerned, it will perhaps be generally agreed that his attempt has been a hopeless failure. The only criterion which he offers for the superiority of one religion to another in respect of its rational elements is the "clarity and abundance" of the conceptions which it possesses. We need not pause to consider how far his claim that, judged by this standard, Christianity is superior to all other forms of religion is justifiable. But the really important question is whether this criterion is reconcilable with what he says, over and over again, about the "unspeakable" object revealed in the numinous state of mind. If every description of the numinous object or the numinous state must reduce the positive reality to a "O," the clearest conceptions about God will be of no avail in representing the positive elements revealed in religious experience. Consequently, the conceptual thought, if Otto's insistence on the inexpressibility and the incommunicability of the numinous has any value at all, must be regarded as giv-

ing rise to a false construction of the highest reality, and not in any sense necessarily connected with the religious life

When, however, all intellectual constructions are thus realised to be extra-religious, the numinous feelings and the numinous objects remain as the only basis of religious experience. And then the question is, as we have indicated above, whether the distinction between the true and the false, or between the lower and the higher, is vouchsafed by such a slender criterion The incommunicable 'feeling-element' is at least a feeling, and so far analogous to, though not identical with, the feelings of pleasure and pain in our experience. If this be granted, then we ought to decide on the cognitive value of the numinous feeling from what we know about the ordinary feelings of pleasure and pain But so far as these non-religious feelings are concerned, it is, we believe, an accepted tenet of psychology that they have no cognitive value at all But even supposing that the numinous feeling does refer to an object, we have to consider, first, whether this reference is due to the feeling itself as an immediate experience, rather than to the function of thought; and, secondly, how far the reference to a bare something is sufficient to characterise that something as divine The only character which the religious experience possesses is that it is unique in quality, but from this to the divine is, at least, a highly debatable passage of thought In a sense, every experience has something unique about it so that it resists all attempts to translate it in terms of another experience, and hence the mere fact of its possessing the feature of uniqueness does not bestow on it the right to be accepted as a divine revelation. And in so far as Otto insists on the universal presence of this uniqueness in all religious experiences which differ from each other in the details of their imageries, it necessarily follows that this, when taken alone, does not help us towards a further determination of the nature of that which is revealed through those experiences. And, as a matter of fact, the mystics have differed from one another

widely in respect of the nature of the object which is thought as communicating itself to their respective visions, and this indicates the considerable part which interpretation or thought has played in mysticism. While agreeing so far that it is an experience which is ineffable and incommunicable, that it is the source of an irresistible belief and imparts a specific tone of blessedness, they have interpreted that experience in ways which are not only divergent from, but palpably contradictory to, one another. And this may be illustrated from the mystic sacrifices of the heathen Semites with their mysteries of initiation to the so-called higher mystic experiences of the Christian Religion. And even if we confine ourselves to one type of religion, its utterances are too conflicting to allow of an intelligible meaning, so much so that W. James, speaking of the Christian mystical life, admitted, almost in a fit of despair, that the sub-divisions and names found in the Catholic books represent nothing objectively distinct. "So many men, so many minds: I imagine that these experiences can be as infinitely varied as are the idiosyncrasies of individuals."

Mystical experiences, we must therefore conclude, stand in need of interpretation and mediation as any other non-mystical experiences, and the mere fact that an experience is actual does not prove it to be real. Every experience has its antecedent conditions which one must satisfy before it can be actually lived. But when the conditions are fulfilled and the experience is generated it does not answer the further question of validity, of objective reality; for, even a false experience, such as illusions and hallucinations, is an actual experience, yet its mere actuality does not testify to its validity. These two aspects of actuality and validity must be carefully distinguished from each other in respect of every experience, and mystic experiences in so far as they are actual experience must be regarded, not from the standpoint of mere actuality, but from that of validity as well. This is all the more necessary, because the conflicts in the mystic experiences

are sometimes more acute than those of ordinary experiences. A cosmic consciousness, an impersonal Absolute, a personal God, the "third heaven," a mere 'that', a mere naught, and a myriad of other objects have been historically claimed to be the contents of mystical experiences. And the difficulty has been increased by the fact that there are experiences simulating the genuine mystical states of mind which have apparently nothing to do with a divine being, far less with an omniscient omnipresent and affectionate deity. These considerations inevitably point to the need of mediation and proof in the sphere of religious experiences quite as much as in that of our ordinary beliefs and perceptions.

Our conclusion here is so similar to that of one of the acutest thinkers of the west that it may be interesting to make a short reference to the views with which he concludes a remarkably searching account of religious dogmas. "What people want is a religion which they can believe to be true. Since they are confronted on all sides with religions different from their own, and with the denial of all religion, it is inevitable that they should ask themselves why they believe their religions to be true. And when the question is once asked, what can avert a widespread recognition that the truth of religion can only rest on foundations too controversial to be taken on trust, and too obscure for many people to investigate?" It is true that "the large majority of men, while human nature remains what it is, are not likely to give up traditional opinions merely on the ground that they have no logical right to hold them. Like opium-eaters, they will preserve their happiness at the expense of their intelligence, though, more fortunate than opium-eaters, their dreams will not unfit them for practical life and will—sometimes—not quit them before death . . . But we want more than this—especially when incompatible dogmas are supported in this way, as is often the case."[32]

[32] McTaggart, *Some Dogmas of Religion*, pp. 293-97

A Modern Device to Escape Logic

The non-rational methods of establishing the reality of God which have so far been considered do not, however, claim to be exhaustive; and in fact it is as impossible to make an exhaustive survey of them as to measure the depth of human prejudices and idiosyncrasies. For, the only mark by which a true belief can be distinguished from a false one is ultimately its logical credentials, and so when these are rejected in the interest of feelings or mere immediacy, there remains nothing to evaluate the truth-claim of a given belief. Nothing is, however, further from our thought in these pages than that religion represents only an "overcome standpoint" which humanity is bound to outlive. All that is urged is that the time is ripe for the recognition that the laws of logical thinking are the only laws of existence, and so it is not only futile but positively harmful to persist in the antiquated tendency to place the burden of our highest and most powerful beliefs on such slender foundations as feelings, emotions, intuitions or temperaments. Nor do we suggest that the logical quest for religious beliefs is as straight as the flight of the crow. To maintain this would be to fly in the face of the plain teachings of history. The acutest intellect, when faced with the problem of religious truths, has succumbed to the force of traditions and blind faith, thus showing the difficulty of the rational search after divine truths. But, howsoever arduous the task and howsoever dangerous the ascent, the only path to God is the path of rational efforts and thinking considerations.

We cannot, however, close our survey, imperfect as it is, without a reference to a characteristically modern method of silencing the voice of reason in the interest of something which has been variously called the practical reason, or the will, or the rational faith. This method is very clearly illustrated in what Bosanquet aptly calls the ontological argument in its form of today, and which consists essentially in the "supersession of the 'ontological argument' by an appreci-

tion of human impulse and emotion"[32] Thus, for instance, the emotional impulse of worship or the instinctive appetite for God may be made the basis of inference and from the actuality of these emotions and instincts follows the objective reality of Deity, much as the existence of food follows from the actuality of hunger, or as the sexual impulse proves the existence of mates. The same sort of argument is illustrated in another form when it is sometimes urged that the main tendencies of our nature must reach satisfaction in the Absolute, or that our conceptions of the ideal in their highest range point to a real Perfection

The first point which we should like to emphasise in this connection is that the duality of reason upon which these arguments are based is a logical figment, and what is false in the sphere of theoretical reason cannot be true in that of practical reason. In other words, the laws of thought which are the ultimate touch stone for distinguishing between the true and the false must be applicable to all facts, intellectual, moral or religious. Our beliefs may be false in the moral and the religious aspects of life precisely in the same sense as in the so-called intellectual aspect, and the ultimate standard of truth or falsity of a moral or a religious judgment is precisely the same as that of the intellectual judgments The essential truth of these observations is granted when it is said "The logical principle of *non*-contradiction, or, to express it more largely, the principle of intellectual coherence, we must and do accept as absolute We accept it as a necessity of reason involved in the possibility of knowing anything—involved therefore in all practical living as well as in the immovable belief in law or order which inspires all scientific investigation. And, needless to say, life and science alike vindicate the principle, all experience may be looked upon as its progressive verification "[33] Similarly, F H Bradley, in spite of his insistence that there is nothing more real than

[32] *Contemporary Philosophy*, p. 67

[33] A. S. Pringle-Pattison, *The Idea of God*, p 259

what comes in religion and that the "man who demands a reality more solid than that of the religious consciousness knows not what he seeks"[19] has yet to acknowledge in no equivocal terms that if "there is to be philosophy its proper business is to satisfy the intellect, and the other sides of our nature have, if so, no right to speak directly. They must make their appeal not only to, but also through, the intelligence"[20] The only point on which we fail to agree with Prof A. S. Pringle-Pattison is when he urges that the possibility of knowledge is ultimately based on "an unproved belief." It is true that "we have not explored the whole of existence, and in the nature of the case can never hope to include all the facts within the net of reason", but this does not make the laws of thought, or, as he himself puts it, the principle of intellectual coherence a mere "postulate of reason" or a "supreme hypothesis," similar in nature to a "venture of faith." We must indicate, however shortly, the reason why such a position is bound to be untenable.

The opinion which Prof. A. S Pringle-Pattison shares with a number of distinguished thinkers, such as Campbell Fraser, Lotze, and others, has offered to many contemporary writers on the nature of religious beliefs an easy method of proving the truth and objective validity of every religious dogma. Thus, to take but one example where many are possible, Mr. E. S. Waterhouse has attempted to prove the objective validity of religion on what he thinks to be the same basis as that on which scientific knowledge has always rested, namely, postulation and verification. The primitive man, he thinks, was "impelled by very practical grounds towards some attempt to safeguard himself The only method open to him was that of postulating, and finding out whether his postulate worked. One postulate was that by magic he could control the forces that surrounded him. Another was that he could conciliate them. Very slowly and irregularly,

[19] *Appearance and Reality*, p. 449.
[20] *Truth and Reality*, p. 221.

the latter postulate gained ground, and led gradually towards a different conception of the character of super human power. Today, amongst civilised peoples, the magical postulate lingers in the dark amongst superstitions, the religious postulate has come into the light as faith in God. But behind all forms of religion, as contrasted with magic, from the lowest to the highest, there is this in common—all postulate that the super-human order is approachable, conciliable, that it is possible to establish a harmonious relation with it. The very persistence of religion indicates that mankind has believed the postulate to be true."[31] This attitude towards religion and its objective validity is further developed by Dr. Kenneth Edward who, in defending Mr. Waterhouse's position, raises the ultimate question about the nature of postulation and verification in general. Postulation, he remarks, "cannot be ignored or discredited by science or philosophy on the simple ground of its being a postulate, for science and philosophy are alike grounded on a postulate of an exactly analogous kind. Systematised experience of any sort would be impossible except for such fundamental postulates."[32] Hence it is further observed that "it cannot be urged that religion must first demonstrate its logical soundness before its postulate is accepted. There can be no *a priori* demonstration of a postulate. The logic of empirical verification is a perfectly well recognised process in scientific and philosophical practice."[33]

Postulation and Verification

Now, in so far as the views outlined above refer to the immediate certainty of an experience they suffer from the fallacies which we have already considered in the preceding pages. Their special emphasis, however, is not on the immediate certainty of the religious experience, but on the progressive verification of the postulate of an order of super-

[31] *Philosophy of Religious Experience*, p. 145.
[32] *Loc. cit.*, p. 202.
[33] *Ibid.*, p. 211.

natural beings, which has gradually developed into the thought of a gracious God in the so-called higher religions. This postulate has worked so far, and hence is commended as true. But the entire analogy, we venture to suggest, is false. The postulate of a world, or unity, or cosmos which lies at the basis of science and philosophy can on no account be identified with an ordinary hypothesis which stands in need of verification by experience. A scientific theory, before it is verified and accepted as true, is a mere hypothesis in the sense that it is liable to be rejected if experience does not support it, in other words, a hypothesis, in the strict sense, is a tentative conjecture requiring verification. But why is this conjecture made at all? Or, why are we to reject it when it is found to be such as can never be verified? The only answer is that a conjecture is made in order to introduce unity into the apparently chaotic mass of materials with which the scientist is confronted. Every theory is thus born of the attempt to remove contradictions from our existing knowledge, or, what is the same thing from the other side, to introduce unity into our experience. So, a hypothesis is verified when it is found to serve the purpose for which it was invented, that is, when it makes our knowledge more systematic or unified than before. The function of a scientific theory, therefore, is to explain, or unify, or systematise the facts of experience. When this is realised, the mistake of identifying a hypothesis with the postulate of Unity of Nature or World is at once apparent. It is because the world is already accepted to be a unity or a systematic whole that we ever care to frame hypothesis or to verify them by experience. That is, invention of hypothesis and its verification are intended for constructing a coherent world out of an apparently incoherent mass of materials, and so the unity of the world is the ultimate presupposition of all scientific processes, including hypothesis and verification. It follows from this that verification which presupposes the unity of the world cannot itself furnish a

proof of its own presupposition; and in this sense the unity is an *a priori truth*. Mill's sad failure to furnish an empirical proof of the Uniformity of Nature should put a stop to all such attempts to identify the ultimate postulate of knowledge with a mere hypothesis.

That the world is a unity, we submit therefore, is not a hypothesis or a mere working postulate which stands in need of empirical verification, on the contrary, its truth is presupposed by every assertion, positive as well as negative, about the real world. A hypothesis is rejected only when it fails to explain certain facts, and the explanation is nothing other than unification or systematisation. But when a hypothesis is thus rejected, we do not on that account reject the ultimate postulate of the unity of nature; rather, that is rejected because the ultimate postulate cannot be rejected at all. In other words, the law of non contradiction which is in fact involved in the principle of the unity of nature, is the ideal which inspires all knowledge, scientific, as well as philosophical, and hence to deny its truth, even in the interest of an empirical verification, is to assert it. This, surely is not, then, "a venture of faith" in the same sense in which a scientific hypothesis or the postulate of a gracious God is one. You may deny the existence of ether, or the reality of a merciful God so long as they do not help you to unify experience, or long as they appear to be inconsistent with those laws which have organised experience and knowledge But you cannot deny the principle of unity without in the same breath re-asserting its truth.

If then it is agreed that the religious dogma of a gracious God is not analogous to the ultimate postulate of science and philosophy, can the former be called a verified hypothesis? Even this, we submit, is not altogether true. The type of verification which is appealed to by Messrs Waterhouse and Edward, if accepted as vouchsafing the truth of the dogma, would very easily establish the reality of even such things as ghosts, spirits, hell and heaven, because the latter have

historically proved themselves to be very potent factors in regulating and influencing man's conduct and behaviour. And judged in the light of this type of verification, it is impossible to condemn the crassest superstition as false, except by dogmatically asserting that all beliefs which influence the conduct of the so-called civilised people, as distinct from those which are prevalent among the so-called uncivilised, are not superstitious. Such assertions may flatter some, but are not on that account true.

A PAN-LOGICAL CONCLUSION

After this necessary digression, we must return now to the duality of reason, and insist at the risk of repetition that the duality is a logical figment, a kind of subtle escape from the principle of rigorous reasoning and thinking. When a religious dogma loses its prestige—and it is well known how frequently such occasions have arisen with the progress of scientific knowledge and discoveries—it is prudent to cease to depend upon the principles of intellect for the justification of the religious belief, but does this stop prove the reality of the belief? The universe which was limited by the Romans to the Mediterranean valley and the south-western part of Asia might have the sanction of the Catholic savants of the fourteenth century, but it would surely be preposterous to urge that this picture of the universe was true in a peculiar sense, and consequently its truth remained unchallenged by the discoveries of Columbus, Vasco De Gama, or Magellan. Similarly, the discoveries of Tycho Brahe, or of Copernicus shattered some of the cherished dogmas of the old Church, but would it be legitimate to hold that, in spite of the inconsistency between the scientific and the theological beliefs, the latter are true in a sense which the intellect cannot fathom? This attitude, we believe, will find favour with no religious man of the present century, who will surely be ready to reject as false the dearest dogma when it is found to be irreconcilable with the results of scientific investigations. To put it in a general form, everything that can be

thought of as real,—whether it be something in space and time, or something beyond the spatio-temporal limitations—must belong to one All-comprehensive System; and, conversely, nothing can be real which cannot enter into harmonious relations with the other members of the System. And it further follows from this that our strongest desires, or the deepest instincts and impulses cannot be the basis of sound inference in so far as they suggest the reality of things that are unacceptable to the System as a whole. It is therefore altogether futile to avoid the path of the intellect in matters of morality or religion; nay, every attempt to curve out a new path is sure to lead us to the region of pure dogmatism which is but another name for the attitude of 'no reason'. And from this attitude to that of scepticism there is an inevitable passage of mind, to which the history of theories bears ample evidence.

A. C. MUKHERJI

THE PROBLEM OF NEGATION

The problem of negation is one of the most perplexing problems of philosophy. How perplexing it is, Plato has shown in the 'Parmenides' and the 'Sophist'. The problem has chiefly been approached from the side of logic. But there is no reason why it should be approached only from this side, for it is as much a problem of metaphysics as it is of logic. It can also be studied from the point of view of values.

I therefore propose in the present paper to discuss the problem under three main heads: (1) the logical problem of negation, (2) the metaphysical aspect of the problem of negation, and (3) the problem of negation viewed from the standpoint of values.

I. *The Logical problem of negation*

From the point of view of logic, the problem of negation is: If all judgments are affirmative, how can there be any negative judgments?

Readers of Bosanquet's 'Logic' need not be told how difficult the problem of negation is for the logician who holds that every judgment is a reference to reality. If all judgments assert something about reality, how can there be a judgment which does not assert but only negates? The only possible answer is, that even the negative judgment asserts.

What, however, does the negative judgment assert? When I deny that A is B, what is it that I assert? It was once supposed that when I say 'A is not B', I assert the existence of a 'not-B', which however, is wholly indeterminate. What, however, is the logical value of such an assertion? If my assertion asserts nothing definite, then its logical value is nil. 'Not B', therefore, in the sense in which it was understood by the older school of logicians,

in the sense in which it could refer to an elephant, a horse, a mountain or a mole, is devoid of all logical significance. The judgment 'A is not B', or, as it is called, the infinite judgment, really asserts nothing.

I must, therefore, be supposed to assert something more than this 'not-B' of the older logicians if I am to believe that the negative judgment 'A is not B' really asserts something. I must be understood to be making a statement about something definite when I say 'A is not B'. This is what Bosanquet means by saying that all negation must be 'significant negation'. When I say, 'This is not yellow', I must not be understood to be referring to something totally indefinite, which may be a mouse or a mountain. I must, on the other hand, be supposed to be referring to some colour, such as red or green. In other words, there must be some *limitation* to the infinite scope of the assertion. But when thus limited, the negation becomes what is called *contrary* negation. We thus arrive at the following conclusion: All negation, if it is to have any meaning, must be contrary negation.

Contrary negation not merely excludes but also asserts something significant. Its logical form is 'It is not B but it is C', B and C being distincts belonging to the same class. The object of contrary negation is therefore to assert one distinct by excluding another. Even ordinary language recognises this. When, for instance, I say, 'I am not going to Calcutta', people expect me to complete my sentence by saying some such thing as 'But I am going to Patna'. Of course, I may not intend to go anywhere at all, but even in that case, I shall have to complete the sentence by saying 'But I shall stay at home'.

But contrary negation suffers from one serious defect. It is formally incapable of allowing any conclusion to be drawn from it. If A and B are distincts and not contradictories, then it is impossible to assert B from the negation

of A. It is only when A and B are contradictories, that it is possible to affirm B by denying A. We have thus the paradox of negation. If a significant conclusion is drawn from negation, then it is formally inadmissible. If a formally admissible conclusion is drawn, then it is useless.

This paradox leads to the question of the nature of formal logic and of its relation to the logic of the real, into which we cannot enter here. We must, however, indicate the direction in which the solution of the paradox is to be sought. The solution lies in the combination of the two kinds of negation, contrary and contradictory. Or rather it lies in the recognition of the condition which makes such a combination possible. This condition is nothing else than this: Reality is a system.[2] The reason why we can invert contrary negation with the force of contradictory negation is that Reality is a systematic unity. When a contradictory becomes a contrary, it means that the opposites given by the disjunction 'Either ... or' fall within a system. It is only in a completely systematic whole that the exclusion of one thing means the affirmation of a positive opposite. This fact we notice in all sciences where knowledge comes close to being perfectly systematic. If it is not the planet A, it must be the planet B: it is possible for astronomy in these days to speak like this. Of course, strictly speaking, no science has up to now attained that kind of systematic unity which alone makes it possible to raise a contradictory to the level of a contrary. But if it has not done so, it is due to no defect of science as such, but to the fact that our knowledge still falls far short of being a completely organized whole.

Negation, therefore, if it is to be truly significant, must not only exclude but also exhaust. These conditions are fulfilled in disjunction, and therefore Bosanquet looks upon disjunction as the goal towards which all negation tends. Disjunction, again, is the form in which alternately

[2] *Vide* Bosanquet, *Logic*, Vol. I, 2nd edition, p. 251.

systematic connection is to be expressed. When knowledge becomes perfectly organized, then it is possible to arrange it in a series of disjunctions of the form 'Either A or B', 'Either B or C', 'Either C or D', etc. In other words, it is possible to say that as soon as A is just not B, it becomes C, and as soon as it is just not C, it becomes D. Thus in a complete system, knowledge always passes from one positive to another through negation without leaving any gap. All progress towards systematisation, therefore, is a process through negation.

Let us examine now the presupposition upon which the above view is based. It is, as Bosanquet says, that reality is a system. By 'reality is a system' Bosanquet evidently means that it is continuous. If there were any gaps in reality, then it would not be possible to put it in the form of a series of disjunctions. If reality consisted of a number of peaks between which lay deep valleys, then it would not be possible to say, "Just as A is not B, it becomes C, and just as it is not C, it is D." The basic assumption, therefore, upon which the above view of negation rests is the continuity of reality. A system, however, need not necessarily mean continuity. We may have discontinuous systems as well as continuous ones. The series of quantities in harmonic progression is a system, although it is discontinuous. At any rate, it would have conduced much to clearness if Bosanquet had indicated what exactly he meant by a system. The identity between continuity and reality has been the racy assumption of all idealists ever since the time of Leibniz. But as I have shown elsewhere[8], the logic of the real does not necessarily involve any such identity.

Negation, being thus a fundamental form of the expression of reality, the next question that arises is: Which is the logically prior form of expression, the affirmative or the negative? I have already indicated the reasons which

[8] Vide *Logic of the Real*, "Proceedings of the Second Session of the Indian Philosophical Congress, Benares, 1926".

have led logicians to regard affirmation as more fundamental. It has been, however, maintained by some logicians, notably by Royce, that affirmation and negation stand, from the point of view of logic, on a footing of absolute equality. If the positive is given a higher place than the negative, this is due not to logical, but to extra-logical considerations of value. That we place the good higher than the evil or truth higher than error, is, according to these logicians, due to our interest in values. That there is a great deal of truth in this view, and that negation plays a very important part in the constitution of values, we shall presently see. For the present, however, I must be content with remarking that the essential connection of all judgment with reality makes it impossible for me to accept the theory of an absolute equality between the positive and the negative.

Indian grammarians recognized many other meanings of negation than the two we have discussed. According to a widely prevalent view, negation has six different senses, as indicated in the couplet: "तत्सादृश्यमभावश्च तदन्यत्वं तदल्पता। अप्राशस्त्यं विरोधश्च नञर्थाः षट् प्रकीर्तिताः॥"[23] According to this view, negation expresses one of six meanings—resemblance, absence, difference, insufficiency, non-emphasis and opposition. If we analyze, however, these six senses, we shall find that they are all reducible either to difference or to opposition.[24] Take, for example, 'अकेशी', which is usually given as an example of 'तत्सदृशता'. Here the word does not mean one who has no hair but one whose hair is thin. Negation, therefore, here means difference.

Before I leave the purely logical aspect of negation, I must deal briefly with the problem of double negation. This problem, as we shall presently see, only illustrates in a

[23] So also the four kinds of अभाव recognized by the Nyāyikas—प्रागभाव, प्रध्वंसाभाव, अत्यन्ताभाव and अन्योन्याभाव—are reducible either to contrary or to contradictory negation. प्रागभाव and प्रध्वंसाभाव mean absence during portions of time, and therefore mean presence at a 'distinct' during other portions; अन्योन्याभाव is clearly nothing but contrary negation. अत्यन्ताभाव is the contradictory of real existence.

pointed manner the principle already laid down, namely, that there can be no negation without limitation. Negation must be both exclusive and exhaustive, and if it is to be exhaustive, there must be some limitation, or else the infinite judgment would arise.

The problem of double negation has been treated of in three different ways by the three leading logicians of the present day, Sigwart, Bradley and Bosanquet. According to Sigwart, all negation presupposes a previous affirmation, and double negation, by wiping off the negation, brings into view the original affirmation[1]. The process, in fact, is similar to that of lifting the veil from a picture. Bradley dissents from this view. According to him there is no previous affirmation presupposed in negation. He thinks, however, that the real ground for the double negation 'It is false that A is not B' is the knowledge that 'A is B'. Without this knowledge double negation is not possible[2].

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[1] *Vide* Sigwart: *Logic*, Vol. I, pp. 148-49. He thus states his view: "But as soon as we see that every negation presupposes a previous synthesis, its only object being to declare this synthesis invalid, as soon as we see that the negation is a particular act in which the 'not' has the force of a judgment concerning a judgment (either attempted or complete)—then it becomes clear how far the negation of a negation is possible . . . "It is false that A is not B" says that it is impossible to state that the proposition "A is B" is false, or, as this may other predicate than B to A, to prevent the unification of A and B. And if the objections to the synthesis A w B are impossible, then this synthesis must hold good."

[2] Bradley explains his position as follows: "I will briefly explain. We know well by the time that, in judging A not to be B I presupposes a quality in A which is exclusive of B. Let us call this Y. I now desire to deny my judgment, and need, as before some quality as the ground of my new denial. Let us take some quality other than B. Let this quality Z be exclusive of Y, and let us see what we have. We have now AZ with the exclusion of Y which excludes B. But that leaves us nowhere. We cannot tell now if A is B or is not B, because Z itself, for anything we know, may also exclude B, just as much as Y did. What, in short, we have got is our own private impotence to deny "A is B" but what we want is an objective ground for declaring such a result to be false" (*Principles of Logic*, 2nd edition, Vol. I, p. 173)

Bradley, however, sees that in those negations where there is limitation, the ground of double negation need not be the positive knowledge 'A is B'. He thinks, however, that this is not the case with all negations. In the note appended to Book I. Chap V. in the Second Edition of the *Principles of Logic*, Bradley admits that his view is incorrect and accepts that of Bosanquet, namely, that negation is of the form of disjunction and involves a limitation of possibilities.

We thus arrive at the view of Bosanquet, that double negation only illustrates the fundamental characteristic of all negation, namely, that it involves limitation. What we should remember is that in all true negation the possibilities are always limited by means of a disjunctive judgment. This may be illustrated, in the case of double negation, by taking the example given by Bosanquet[4]. If we divide the Liberals in Gladstone's time into the Unionist Liberals and the Gladstonian Liberals, and say, with reference to any person that 'he is not not-Gladstonian', then we need not have the prior existence of the judgment 'He is a Gladstonian', as Bradley asserts, but we arrive straight at the judgment, 'He is not not-Gladstonian' by the denial of the judgment, 'He is a Unionist'. Here the possibilities are limited by the disjunction 'Either he is a Gladstonian Liberal or he is a Unionist'. When such a limitation of possibilities occurs, we pass straight from the denial of a positive quality to a positive result which limits it.

Double negation, therefore, says Bosanquet, performs the same function as the negative instance in induction, the function, namely, "of approaching any positive content from the side of its limit, of the exact boundary at which it ceases, and some other content begins"[5].

The only criticism that we have to offer has already been stated. This view holds good only when we accept the Leibnizian principle of the continuity of Reality. 'Just

[4] Vide *Logic*, Vol. I. p. 300 (2nd edition).
[5] Ibid, p. 307

when A ceases to be B, it becomes C; just when it ceases to be C, it becomes D. This statement is only possible if there are no gaps in Reality. It must not be supposed that the doctrine of Coherence necessarily involves this kind of continuity of the real. In fact, there is here an evident confusion between coherence and mathematical continuity.

II. *The metaphysical aspect of the problem of negation.*

We now come to the metaphysical aspect of the problem of negation. What is the part that negation plays in the constitution of reality? The view of Hegel on this question is familiar to everybody. According to him, negation is the very essence of reality. The ascent in the scale of reality is really a continuous passage through negation. If we conceive of any reality which does not involve negation, such as the 'Being' of Parmenides, we find that it corresponds to the lowest grade of reality.

It is, in fact, in that power to negate itself that the distinction between reality and abstraction lies. Where this power is wanting we are in the region, not of the real but of an abstraction. The 'Being' of Parmenides is an abstraction, as is the 'Substance' of Spinoza. The concreteness of reality lies precisely in the readiness with which it can fall into contradiction with itself.

So far so good. Our difficulties, however, begin when we try to think of the condition of the highest reality, the Absolute. Is the Absolute positive or negative? Of course, it would be said, the Absolute must be positive, for it is a contradiction in terms to talk of the Absolute as negative. What becomes, however, of the statement, broadcast by the Hegelians, that every reality must involve negation? If this statement is true, how can the Absolute be merely positive? Must we not say that a negation also is involved in the Absolute?

Various attempts have been made to solve the difficulty. One solution is to assert that the Absolute is only Absolute

logically, but that as a self revealing process it eternally involves negation. But this is no solution, as Joachim points out[1] for the Absolute as self fulfilled cannot by any logical jugglery be identified with the Absolute as self fulfilling.

Nor do we solve the difficulty if we assert, with Mc. Taggart and Bradley, that negation is the condition not of the ultimate reality, but of the reality that falls short of it, the reality, that is, which in Bradley's terminology is an "appearance"

This solution, however, is not possible from Hegel's point of view, for as Bosanquet has pointed out[2], contradiction is the essential element of reality, according to Hegel. In fact, Hegel believes that what sustains the universe is contradiction It would not do therefore, to whittle down the principle of contradiction, as Mc. Taggart and Bradley have done

There are, however, greater difficulties in the way of accepting Bradley's solution In order to maintain his position, Bradley has to take recourse to three propositions: (1) that the whole of reality can be arranged in an ascending scale, according to the greater or lesser amount of contradiction that is involved; (2) that at the highest point, namely, the Absolute, there is a total absence of all contradiction, and (3) that the Absolute is not accessible to thought. The third proposition is very significant. It clearly amounts to a confession that from the point of view of rationalism, it is not possible to maintain any Absolute Bradley, in fact,

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[1] *Vide* Joachim. *Nature of Truth*, p 114.

[2] *Vide* Bosanquet *Science and Philosophy*, p. 79 Bosanquet quotes, among others, the following passages from Hegel's *Logic* (Vol. I of his 'Encyclopædia of the Philosophical Sciences') "What moves the world is contradiction it is ridiculous to say that contradiction is unthinkable" "Whereas people say contradiction is not thinkable the truth is that in pain which a living being feels it is actually a real existence" "Formal thinking prescribes to itself the rule that contradiction is not thinkable, but, in fact, the thinking of contradiction is the essential moment of the Notion"

shows that the negative element can never be overcome by thought or reason, and that consequently, it is a contradiction in terms to talk of an Absolute of pure reason. If, therefore, the Absolute is to be maintained, it is to be done with the help of immediate experience and not with the help of reason. This is a cruel joke which Bradley has perpetrated upon his idealistic [illegible]. Seeming to follow the same path as the Hegelian idealist, Bradley turns a somersault, and confronts his fellow idealists with the dilemma: Either follow the path of your master and give up all hopes of reaching the Absolute, or take the road of immediate experience which alone can take you to the Absolute.

Another solution is that offered by Bosanquet. He makes a distinction between contradiction and negativity, and asserts that although negativity is fundamental in all that is real, contradiction is not.[10] Thus, although contradiction vanishes in the Absolute, negativity remains. This negativity, Bosanquet explains, is the same as that which Mc. Taggart describes "as the tendency of all finite categories to complete themselves (notice the limitation to finite categories) and the same which Green expresses as the nature of a Self which is self conscious or at once its Self and its other." This negativity, he further expounds, "is the spirit of difference which survives even in a resolved contradiction, and when we possess what is most real and thinkable." The net result, therefore, is that "affirmation and negation may even become co-equal and interchangeable in content, but a real whole must always *bona fide* hold them both together."[11]

This distinction between contradiction and negativity is essentially the same as that made by Croce between the con-

[10] Vide *Science and Philosophy*, pp. 79-80. He thus states his view: "Logical contradiction, I admit, as a vanishing element belongs to the sphere of the finite, and minimum itself on the higher type of experience as the character of finiteness approaches a minimum. With negativity or negation the case seems to be different. This belongs to the fundamental structure of everything that is real."

[11] Ibid, p. 61.

tradictory and the distinct in his book *What is living and what is dead in the philosophy of Hegel*. Croce's main criticism of Hegel's philosophy, in fact, rests upon the distinction. Croce says that Hegel ignored this distinction and with disastrous results. He applied the logic which was true only of the contradictory to the distinct, so that distinct conceptions, such as Nature and Spirit, Mechanism and Teleology, were invested by him with the characteristics of contradictories and treated from the standpoint of contradictories.

The full discussion of the point raised here will take us far beyond the limits of this paper. Some discussion of it the reader will find in the writer's paper on *The Logic of the Real*.[12] The logical implications of this distinction I have already discussed in connection with the relation between contradictory and contrary negation. It should be clearly stated, however, that from Hegel's standpoint this distinction cannot be maintained. In fact, the whole of the Hegelian philosophy is an attempt to prove that what is a contradictory from the point of view of logic is a contrary from the standpoint of the evolutionary process. Indeed, this is what he means by the identity between the dialectical process and the cosmic process. The mainspring of the dialectical process is contradiction; unless two concepts are brought face to face as contradictories, the dialectical process cannot take place. The movement of the dialectical process is through contradictories, but it is identical with the cosmic process which is through contraries. The march of history is nothing but a succession of contraries—one nation or tribe succeeding another, one organization or institution being replaced by another—but it is an exact replica of the dialectical process which is through contradictories.

Moreover, even if contradiction disappears and contrary negation remains, there will be the same difficulty regarding

[12] *Vide Proceedings of the Second Session of the Indian Philosophical Congress*, Benares, 1926.

the Absoluteness of the Absolute. How can the Absolute be called absolute, if there is a 'distinct' remaining by its side which it cannot absorb? Such a distinct would constitute an 'other' and, as Joachim says, would break the coherence of the Absolute

No solution perhaps is wholly acceptable, but I think the best way out of the difficulty is to regard the Absolute, as the Bhakti School did, as Absolute in its concreteness. Not only negation, but all contradictory relations would then form part of the inexhaustible fulness of the Absolute. A somewhat similar conception of the Absolute we find in Höffding's "Problems of Philosophy", where he has given us a picture of Being which is inexhaustible in its concrete richness. In this inexhaustible richness of Being contradictions lodge quite easily[12].

The problem of negation has also presented considerable difficulty to the Advaita philosopher On the one hand, the Absolute must be absolutely positive. On the other hand, it must be different from whatever we experience or conceive It must therefore be defined both in positive and negative terms. This is done in the Upanishads by describing it sometimes as "अणोरणीयान् महतो महीयान्" and sometimes as "अशब्दमस्पर्शमरूपमव्ययम्"

Samkara solves the difficulty, as Bradley does, by admitting grades of reality. Four grades he recognizes, namely, तुच्छसत्ता, प्रतिभासिकसत्ता, व्यावहारिकसत्ता and पारमार्थिकसत्ता The Absolute in its own essence has पारमार्थिकसत्ता or absolute reality and is absolutely positive, but judged in relation to the other सत्ताs, it must be defined in negative terms as 'not this, not this'. So again, the other सत्ताs

[12] "With some right", says Höffding, "with which we reason from the possibility of rational knowledge to a unifying force in Being, we might, apparently, reason to an irrational power in Being, to a cosmological principle that prevented the elements of Being from standing in a mutually determinable relation to one another" (*Problems of Philosophy*, p. 135).

judged in the light of the Absolute, must be pronounced to be full of error, just as in Bradley's system, all reality short of the Absolute contains some contradiction.

This is, however, no solution. The negative element is not annulled but persists throughout the four grades. An attempt, however, is made to get rid of the negative element by suggesting that it itself owes its origin to the Absolute, being nothing but a peculiar power (शक्ति) of the latter. But this raises precisely the difficulty noticed in Hegel, namely, what is the need for the Absolute to limit or negate itself? If the Absolute is eternally self-fulfilled, why should it limit itself to give rise to a phenomenal process? Hegel takes shelter under his dialectic, the Advaita philosopher under अनिर्वचनीयता or the supra rational character of the power in question.

III *The problem of negation from the point of view of values*

I now come to the last part of my task. What is the part that negation plays in the region of values? I have already mentioned the view of Royce, according to whom, our preference for the positive and aversion for the negative is entirely due to the operation of values. From the point of view of logic, there is absolute equality between the positive and the negative[14].

Although I am not in a position, for reasons I have already explained, to accept the second part of Royce's statement, I am in substantial agreement regarding the first part. That is to say, I hold that values have an important part to play in the accentuation of the distinction between the positive and the negative.

All philosophers of value define values by contrasting them with what they consider to be valueless. Thus, in Münsterberg the contrast is between Nature and History,

[14] *Vide* Royce's articles on *Negative* in the *Encyclopaedia of Religion and Ethics*.

in Stern between Person and Thing, in Dilthey between Geisteswissenschaften and Tatsachenwissenschaften, in Rickert between Culture and Nature. The negative element, therefore, has in all these philosophers been made use of to define the values. It seems indeed that values cannot be rendered definite without a background of negation.

Taking first the ethical value, we find that the power to negate, to refuse to accept the right and to choose the wrong, is the essence of freedom upon which the whole fabric of morality rests. To be free means to be free to reject a suggested action, to turn down a proposal even if it should happen to be the best conceivable. 'Do you accept my proposal?' 'No'. This 'no' expresses the freedom of the individual to reject a suggested course of action. In its extreme form, it expresses the freedom to choose the wrong and reject the right.

All morality rests upon this background of negation. Without it the moral value would lose its distinctive feature. As Royce says, "without negation, none of the contrasts could be defined, there would be no clearness with regard to values, no knowledge of heaven or hell, good or evil"[16]

On its positive side, the moral value disturbs the attitude of indifference or apathy which shows no preference for good over evil. It creates a strong presumption in its favour by pointing to essential human needs that find satisfaction through it. If the matter was left entirely to be judged on metaphysical grounds, one could not be quite sure whether good would be given a higher status than evil. But if the matter is judged with reference to the satisfaction of essential human needs, then surely, good comes out as a thing to be preferred to evil. The positive character, therefore, with which morality invests the good is due to its being considered a value.

As with ethical, so with other values. Values arise out of an effort to disturb the neutrality of Being. As com-

[16] Article "Negation" in the *Encyclopaedia of Religion and Ethics*

paired with the values, Being or Reality expresses an attitude of indifference or neutrality, for which good has as much place as evil, the beautiful as much as the ugly. Values disturb this neutrality by investing certain portions of reality with a character which they deny to the rest. But behind all this showering of positive qualities there is the dark background of negation.

This opposition between Being and Values is represented by Höffding as an eternal conflict. In his *Philosophy of Religion*, he gives a picture of the universe in which values have to make a desperate struggle for self preservation against Being. Negation is here no longer a mere dark background but has become an active enemy. What is the outcome of this struggle? Höffding says that if religion is to be at all possible, there must be faith in the conservation of values, that is to say, in the ultimate triumph of values in this warfare against Being.

But can we rest content with this picture of an Ormuzd-Ahriman fight between Being and Value? Can we be satisfied with the conception of a universe which is permanently split up into two orders—Being and Value? What becomes of the demand not only of Metaphysics but also of Religion for a unitary world?

Moreover, can Religion be entirely indifferent to the question of Being? It is certainly a matter of vital importance for it to ascertain that the gods whose worship it enjoins do really exist. The higher the religion, the more closely, in fact, does its God approximate to the highest metaphysical Being. The attitude of Religion towards the highest Being may be different from that of metaphysics, but the God of religion cannot be conceived to be anything else than the Absolute of metaphysics. Readers of Bradley's "Appearance and Reality" are aware what unnecessary difficulties he creates by his attempt to separate the two.

Lastly, from the side of Being, the distinction between itself and values cannot be maintained. Being cannot be re-

garded as completely neutral. It must itself be a value. It is impossible to accept the view that the Absolute has no relation to human aspirations. The Absolute would in fact cease to be Absolute if it were out of all relation to our world of values.

We must, therefore, discard the view which we provisionally adopted, that Being is merely a negative background. Being itself is positive, and consequently, the distinction between the negative Being and the positive values cannot be maintained in the manner in which Höffding and other philosophers of values would maintain it.

S. K. MAITRA

THE SELF

"Known Thy-Self" is an exhortation of the wise men of all ages and climes. And knowing the Self appears to be an easier task than knowing the external world, for the latter is known to us only so far as our senses reveal it. What there may be behind the sensible in the external world ever remains hidden from us. Yet it is a great wonder that there is a great deal of difference of opinion among the great thinkers of the world as to what the Self is. A big volume can be filled if only a mention is made of the various views held by eminent thinkers on the nature of the Self. Here we shall only refer to a few typical views held in the East as well as in the West on this important problem.

Descartes starts his enquiry to find out the truth by doubting everything that the common sense or the previously existing thought of the West had taken for granted. In doubting everything he, however, discovers, that the doubter is presupposed in all doubting, and, therefore, cannot be doubted to exist. Doubting is thinking. I think, therefore, I am ("Cogito ergo sum"). This discovery of Descartes that no one can doubt his own existence because he is presupposed as a doubter is the starting point of Modern European Philosophy. Yet it is an old Truth known to Indian thinkers. We find Shankarächärya saying in his *Commentary on the Brahmasütras* (II, 3, 7): "It is not possible to deny the existence of the Self, for it is the very essence of him who denies it."

But, "What am I?" is the next and more important question. Descartes comes to the conclusion that the Self is a *thinking Substance*, for doubting is thinking. He did not examine the idea of Substance critically. Hume raised the question whether there was any *substance* like the Self. His introspection, Hume said, revealed no such entity as an enduring, continuing, and remaining identically the same,

spiritual substance within him, but only a congeries of sensations, impressions, memories and feelings etc. He discovered no Self "other than a bundle or collection of different perceptions which succeed each other with an inconceivable rapidity, and are in a perpetual flux or movement." Exactly in the same manner, long before Hume, did the Buddhist thinkers repudiate the idea of "Self" (*Atman*) as a spiritual substance, which was postulated by the Nayayikas as the thinker, doer and feeler. The Self for the older Buddhists is only a bundle (*skandha*) of the psychical states which are ever in flux, but are held in unity as mind (*citta*). There is no doubt that so far as thoughts, ideas, feelings and interests are concerned, there is a perpetual flux, a constant change within ourselves. And whenever one strives to find out the Self with the help of ordinary introspection, one will stumble at this or that particular and passing thought. The statements of Hume, James and the Buddhists are quite correct so far. But, as Kant in the West and Shankar in India have pointed out, the changing multiplicity of ideas, sensations and feelings etc., alone are not sufficient to explain all the facts and aspects of our inner life. Both Sankara and Kant point out that these changing psychical states are not the Self. The Self is the Subject which unifies and appercieves these states, and without presupposing which, no unity, which is as much a fact of the inner experience as the multiplicity of the ideas, not consciousness of the changing states could have been possible. To seek for the Self in the changing states of the mind, both of them say, is certainly wrong. The Self is the unifying Subject that can never be made object, can never be presented as a thought, sensation or feeling. It is, therefore, absurd to regard it as something known in the ordinary sense. Psychologists cannot observe it, but, as Ward suggests, must presuppose it. Buddhists, Hume and James, who have repudiated the popular idea of the Self, have done a great service to the problem, in so far as they have convinced us that

a search for the Self in the changing states of mind, down from the ego or me to the bodily states and feelings, cannot give us the Self. Truly, indeed, because the search for the Self is not that for the changing aspects of ourselves, nor for the plurality of ideas within, nor even for that which can be the object of our knowledge. It is for the permanent in us, for the unity within, and it is for the Subject which knows every thing else. When a philosopher says that there is no permanent entity found within his mind or in the objects outside, he is quite right in so far as it goes. But to conclude that permanence and unity can nowhere be found, because they have not been found in the objective side of our experience,—both mind and external world—, is absurd. Experience is inexplicable without the presupposition of a Permanent Unity. If we have not found where the Permanent Unity exists, we must only confess that we have not been able to find it, but should not deny its existence. It is not only dogmatic to deny the existence of what is presupposed in all our experience, but also an act of philosophicide, if we can use the expression. If we are honest thinkers, let us say that our knowledge is not yet complete, that we have still to learn. Sir Oliver Lodge has rightly remarked: "The assertions of men of genius are often of value, their denials seldom or never."

What am I then, when the term "I" stands for the Ultimate Subjective Unity? For, after all, it is the "I" that endures amidst all the changes of personality; it is the "I" that unifies all the discrete many that compose the psychical and the external world of my experience, and it is the "I" that is presupposed in all experience. What is the character of the "I". Before finding out the actual character of the "I", let us be sure of a few points in this connection. The search for the "I" is the search for the permanent and continuous. We must not, therefore, expect to find it in the varying and changing factors of our experience. It is a search for the Ultimate Unity within. We should not,

therefore, expect to find it as one of the many contents of our experience. And because it is a search for the Ultimate Subject of our experience, we cannot expect to find it our amidst the objective world and amidst those things and ideas that can be presented as objects of our knowledge. The search is no doubt a difficult one. Many philosophers, especially in the West, have failed in the search for the Self, simply because they neither understood what they were to search after, nor where to seek for it.

The great Psychologist, William James, sums up his discussion on the problem of Self by saying. "Personality implies the incessant presence of the two elements, an objective person, known by the passing subjective Thought recognised as continuing in time" (*Principles of Psychology*, Vol I, p. 371). The main difficulty that lies in this conclusion is how a "passing" subjective thought could be recognised as "continuing in time". How can the "I", the unchanging background of all the changing "*me's*" be "a Thought, at each moment different from that of the last moment" (Ibid p. 401)? It is a very simple truth pointed out by the author of *Bhamati*, the great Vacaspati Misra, that "what varies not nor changes in the midst of things that vary and change is different from them". The "I", therefore, which is felt as continuing in time must be distinguished from that which passes away. It cannot be one of the series of passing thoughts, but something behind and beyond the series. We may not of course be able to separate the passing *mes* from the enduring "I", simply because it is a factor that cannot be thought away from any passing *me*. Yet we can determine its character by negating from it all the passing *mes*. In this connection it may be objected, as Kant did actually object, that it may be that this unity of apperception may not have any existence apart from its function of unifying the passing sensations or ideas. There is no fear like that. For, there are other levels of our experience in which the passing *mes* of the

ordinary waking consciousness are altogether absent, but the Self is still felt to be continuing in the same way as it does in the waking experience.

Our concrete personality, which is called the *me* by William James, may be analysed into several factors: the physical *me* (*annamaya*), the sensative and appetitive *me* (*prāṇamaya*), the thinking and willing *me* (*manomaya* and *Vijñānamaya*), and the feeling *me* (*ānandamaya*), as James Ward (*Psychological Principles*, Chap. XV, Sec. I) and the *Taittirīya Upaniṣhad* have suggested. Which of them can be or cannot be regarded the Self, or the real "I" as distinguished from the "me" or the 'I' of the moment, will depend upon which one of them endures or does not endure in all the levels of our experience which we often wrongly suppose to be identical with only one level or aspect of it, namely, the ordinary waking experience. Hindu philosophers have taken the entire experience into consideration in constructing a metaphysical theory. They have observed that there are four main levels or kinds of experience, namely, waking, dream, deep sleep and samādhi. At one time or other of our existence we are in one or the other of these four states of experience. Our Self should not be only that which endures throughout our waking existence but also that which endures throughout all other kinds of experience in which we exist this or that time. If any factor of our personality ceases to be experienced in any of these states, it cannot claim to be our Self. For it is absent when we are present. Our existence cannot be, on the other hand, denied in any kind or level of experience, for "experience without an experient is unintelligible", as James Ward rightly points out. We agree with Ward when he says: "It is the I—not the me—that . . . is essential to any experience, while the me is essential to only some" (*Psychological Principles*, p. 379). Another consideration that has to be kept in view is that all those factors of my personality that can at one time or other be made objects of experience, that is,

can be observed externally or introspectively, have to be discarded as the not-self. For, the search for the Self, as we have already pointed out, is the search for the Ultimate Subject of our experience, and, as Ward says, "there would be certainly a difficulty if we maintained that the subject of our experience could ever be the direct object of its own experience" (Ibid., p. 380).

Now, a careful study of the various kinds of experience will convince us that almost all the factors of our objective personality or *me* pointed out above are contingent. They cease to be experienced in this or that state of experience. The "anna maya" (physical) *me* which is lying in the bed is not experienced in dream, the "prāṇa maya" (the sensitive and appetitive) *me*, the "manomaya" (the thinking and willing) *me*, and the "vijñānamaya" (the intellectual) *me*, all absent from the experience of deep sleep in which nothing but a vague feeling of pleasure forms the content of our experience; and in a higher mystic experience, called samādhi, "which a truly scientific psychology should no longer continue to ignore", even this vague feeling of pleasure (the "ānandamaya" or the feeling *me*) is changed into a clear experience of Blissful Existence, in which no duality is experienced, and the subject and the object exist as if eternally united in the Unity of experience which is above the distinction. Throughout this variation and dropping of the *me*'s the Self continues as Consciousness or awareness (*samvit*), which never changes although its objects change. Consciousness is therefore declared to be the essential character of the Self by the Vedantists and the Sankhya philosophers. There is no time when the Self ceases to be conscious. The objects of consciousness vary and change, but consciousness as such does not cease to be, does not change (Vide *Pancadaśī*, Chap. I). For, if Consciousness itself suffers changes, they must be known by consciousness itself. Change must be in the objects and not in consciousness, for the latter is presupposed as the witness of the change,

which would remain unknown otherwise. Green rightly observes: "Neither can any process of change yield a consciousness of itself, which, in order to be a consciousness of change must be equally present to all stages of the change, nor can any consciousness of change, since the whole of it must be present at once, be itself a process of change; within the consciousness itself there can be no change" (*Prolegomena to Ethics*, p. 23). And, "No one and no member of a series of related events can be the consciousness of the series as related. Nor can any product of the series be either" (*Ibid.*, p. 21). The Vedantists have argued that the Self or Consciousness does not cease to be even in the dreamless deep sleep. Their argument may be summarised thus: "Even in dreamless sleep there is the Self, for when one rises from it one is aware that one had good sleep undisturbed by dreams. This he knows from memory. Since memory is only of presentations, the bliss of sleep and the consciousness of nothing must have been presented during the sleeping state. If it is said that the absence during sleep of disquiet and knowledge is only inferred from the memory of the state before sleep and perception of the state after it, then it is replied that we cannot infer anything the like of which is not presented. If it is said that a negative concept cannot have any percept answering to it, and therefore the absence of knowledge and disquiet is only inferred, it is said in reply that absence of knowledge, etc., to be inferred must be conceivable, i.e., must have been directly perceived during their absence. So we have during dreamless sleep direct consciousness of the absence of knowledge and disquiet. In that state the empirical mind is inactive and pure consciousness alone is present." (Radha Krishnan, *Indian Philosophy*, Vol. II, p. 478-9).

Consciousness does not cease to exist throughout the various levels or changes of experience undergone in a life-time only, but even throughout eternity. There can be no end of consciousness in time. The author of the *Devi*

Bhāgavata argues that consciousness cannot be said to have a beginning or an end, for, "Never has the cessation of consciousness been experienced; if it is asserted that it has been, the experiencer himself stands behind as the embodiment of consciousness" (D. B. III, xxxii, 15-16). The idea is that we cannot say that consciousness does not exist at any time unless *we know* that it does not really exist. But knowing presupposes consciousness. It will certainly be absurd to think that consciousness comes into existence or goes out of existence at any time, for there will be no data for such a supposition. For, "It is here at length that being and knowing meet" (Ward *Psychological Principles*). Moreover, to evolve consciousness from that which had it not would be another absurdity. For, consciousness "is unique" (Green: *Prolegomena to Ethics*, p. 171). "Consciousness shines in its own light" (*Ibid*, p. 172). Green also comes to the conclusion: "Consciousness does not arise out of Nature. Consciousness is never "evolved". It is that which is presupposed by evolution, that failing which there would be no single universe and no evolution at all" (*Ibid*., p. 175). William James is also constrained to think: "If evolution is to work smoothly, consciousness in some shape must have been present at the very origin of things" (*Principles of Psychology*, Vol. I, p. 149). To escape dogmatism therefore, we have to accept that consciousness knows no beginning and no end. "This self-luminous consciousness", says Vidyāraṇya, "neither rises nor sets throughout the months, years, small and great ages past and to come" (*Pañcadaśī*, I, 7). It is always the same. The Self, therefore, is consciousness that endures throughout all the changes of personality, and throughout all times, past and present. The Sāṅkhya and the Vedānta schools of thought hold this view with little differences.

The Sāṅkhya philosophers, who share with the Vedāntists the view that the Self, or the Puruṣha, as the former call it, is pure consciousness divested of all objective factors

of the personality, are, nevertheless, pluralists with regard to the number of the ultimate Selves, and dualists with regard to the nature of the ultimate principles required for the universe. They hold that there is a plurality of such selves (purushas) in the world, and quite distinct and different from them there is a common ground of objectivity (the Prakriti), the various evolutes and forms of which enter as factors in the total personality of ours. All that we have called the *me* in one or the other form, is according to the Sānkhya thinkers, a form of this objectivity with which the Self has wrongly identified itself. Through metaphysical analysis and discrimination the Self (Purusha) will be found to be entirely separate and altogether distinct in nature from the objective or empirical me, then it will ever rest aloof in its own state of self-illumination, as an individual in itself.

The Vedantists rightly discard this duality and plurality of the Sānkhya school. "There does not seem", Prof. Radhakrishnan points out, "to be any basis for the attribution of distinctness to the Purushas. If each Purusha has the same features of consciousness, if there is not the slightest difference between one Purusha and another, since they are free from all variety, then there is nothing to lead us to assume a plurality of Purushas. Multiplicity without distinction is impossible" (*Indian Philosophy*, Vol. II). The author of *Yogavāsiṣṭha* thinks it to be irrational that there should be an ultimate duality between the subject and object of our experience. They must have, according to him, taken their rise from the same Common Ground of Existence, which is the Whole that embraces the two within itself (*Yogavāsiṣṭha*, III, 121, 37; III, 121, 42; VIb, 25, 9, VIb, 38, 9, and III, 121, 53). That ground is the Unity of not only the subjective and objective factors of our experience, but also a Unity of all the Selves, in which it finds expression. It is needless to say that Reason demands the existence of a Universal Consciousness as the deepest reality within us as well as within the objective world. "The Uniform order

of Nature and our knowledge of that order", says Green, "have a common source in a spiritual principle" (*Prolegomena to Ethics*, p. xiii). "The fundamental fact of a Universal Consciousness", Dr. Radhakrishnan emphatically points out, "is the presupposition of all knowledge" (*Indian Philosophy*, Vol. II, p. 306); and "Self, as Universal Consciousness, is to be admitted, if experience is to be rendered intelligible" (Ibid., p. 159). Shankara and his followers have also strongly urged fot the identity between the Universal Consciousness and the Individual Self. But Shankara does not seem to have given any logical grounds for the identity. His only reasons are the statements of the *Upanishads*. In fact, if all the individuals were not at root One, knowledge, morality, love and social organisation would not be possible in the world. There would have been no system in the Universe, and no Law in Nature. Hence the Upanishads have declared:—"*Sarvam khalvidam Brahma*", "*Aham Brahmāsmi*", and '*Tattvamasi*'. (Everything here is Brahma (the Absolute); I am Brahma; Thou art That). The Self is Brahman (अयमात्मा ब्रह्म)।

B. L. ATREYA

PERSONALITY THE FINAL AIM OF EDUCATION

I. *New angles of approach to educational study*

The first three decades of the twentieth century have been extraordinarily fertile in educational developments. No previous period of equal length has witnessed so many remarkable changes in educational programmes and methods. There was no doubt a serious interruption in several countries during the World War but it served on the whole to stimulate a keener appreciation of the importance of education for national welfare and led to the immediate reconstruction of the entire educational edifice.

The outstanding feature of the whole development has been its essentially new angle of approach to educational study. "Experimental education" "Organic education" "Natural education" "Creative education"—all these phrases lay stress on what Stanley Hall has termed "paido centrism" i.e., making the child the centre and seeking in his nature the laws of educational action. In the biological approach to educational study, it has been increasingly recognised that the process of adjustment is two-fold of the organism to the environment and of the environment to the individual. In the physiological approach, the point on which emphasis has been laid is that the body and the mind must be regarded as a unity, though not identical. The researches of Watson, Dorsey, and others have exhibited how the secretions of the glands affect our individual reactions on situations. The behaviour of man may be studied objectively without reference to mental states and processes in terms of responses to stimuli. Although the philosophical implications of behaviourism are unacceptable, one of its important effects has been to increase the emphasis on environment and decrease the emphasis on heredity. Because of the new knowledge of the influence of the body on the mind, our con-

ception of "physical development" has been enriched and its importance realised in its true perspective.

In the study of educational theory and practice from the psychological standpoint, important advances have been achieved. The Faulty psychology has been abandoned. The powers of the mind are regarded not so much as inherent capacities to be unfolded 'as a seed becomes a plant after its kind' but rather 'as effects of responses to stimuli, as the eye arises, for example, because of ether vibrations'. The kind and the quality of mental functions are due to the kind of the world in which we live. "We have our kinds of minds because they are the kinds we need for the best survival in our world." Mental development is synonymous with our understanding and, in a measure, controlling the world we live in.

In the sociological field, a new range of subject has arisen, known as "Educational Sociology". The point that has come to be stressed is that the individual and the social are really inseparable aspects of human nature and experience. Without the social, the individual would only be an animal, if he could survive at all; and without the individual there could of course be no society. The effect of this viewpoint has been to emphasise the role of the accumulated experience of the race, the social inheritance—"our social heritage" to use Graham Wallas's felicitous expression—in the development of personality, and to bring out in bold relief the educational value of social activities.

In brief, the new angles of approach to educational study are based upon a new interpretation of adjustment, a distinct recognition of the influence of the body upon the mind, a novel conception of the mind, and an increased emphasis on the unity of individual and social experience. They all confirm in a striking fashion the view that the making and perfecting of man, *the enrichment of personality*, is the central aim of education.

II. *Individuality and Personality*

It is commonplace to speak of the development of personality as the goal of education. Yet we are apt to overlook its true significance and concern ourselves wholly with matters of machinery—areas, authorities, buildings, time-tables curricula. With the development of new methods and new instruments, there is at times a temptation to lose sight of the ultimate goal. We need to remind ourselves of the central question which is not with regard to text-books, time-tables, examinations, laboratories or libraries but with *persons*. The attention given to these matters is for the purpose of making them "the servants of personality," the means for the development and enrichment of personality

There are three terms that are constantly used in the study of educational problems, *individuality, character* and *personality* The second may easily be marked off from the other two as with it generally comes the idea of moral evaluation. When we refer to a person's character, there is an implication or some sort of estimate of his moral standing. The first is used in the biological sense to mean a separate organism existing independently as a self sufficient unity and possessing a self-maintaining system of activities and forces. "The autonomous development of the individual" is pointed out as the final aim of education. The education that aims at fostering *individuality* is the only education "according to nature"

But the term *individuality* has for educational purposes too wide a denotation and too narrow a connotation; it leaves out of account certain essential factors which may be comprehended under *personality*. When applied to human beings, it implies something more than the biological meaning It is quite common to make an appeal to teachers to respect the individuality of pupils Bertrand Russel in his *Principles of Social Reconstruction* speaks of reverence for the child as an essential qualification of the teacher. In this sense, *personality* is a better and happier term. What we

most respect to our pupil is not the mere separate existence of a kicking animal, but those qualities in him that make him what he is A *person*, according to Locke, must be *conscious* and, according to Kant *free* and it is impossible to attribute both consciousness and freedom to everything having individuality. Moreover, *personality always* implies a reference to the way in which an individual reacts upon other individuals. A man of strong personality is one who has a marked influence upon his fellows. Insistence upon the development of individuality may result in a condition of affairs so graphically and truly set forth by Herbart, in which each person brags of his own individuality. It may justify mere self assertion in the bold Nietzschean sense.

Thus the substitution *of the enrichment of personality* for *the development of individuality* as the aim of education is not merely a change in a more apt terminology. It implies a fundamental difference in outlook, reflecting a different philosophical viewpoint It means a different view of man's nature, a revaluation of naturalistic values, a novel conception of man't destiny. Man's mission is to fulfil and enrich himself by his creative activities.

III. *The meaning of personality*

The word *person* owes its origin to the Latin *persona*. In Greek and Roman dramas the same actor often played different roles and this necessitated some kind of distinctive marks. These marks were in the form of masks which were so designed that the mouth acted as a megaphone whereby the actor could make himself heard even in the distant portions of the amphitheatre The Latin word for a mask is *persona* which is derived from the verb *personare* "to sound through" or "to fill with sound". The word came to be combined with dramatis and thus *dramatis persona* was an indication of a particular character being impersonated

The Roman conception of personality emphasized the legal aspect. The Roman Law recognized a person as one who possessed rights and obligations. The Roman jurists

found in the concept of the law of nature a rational basis for political and moral relations It is the rational nature of man which makes him social The social order provides man with opportunities for the fulfilment of his personality

Thus the Roman conception of personality was legal and political. The Roman citizen had certain rights which the state offered to him and in return he had to fulfil certain obligations he owed to the state.

Modern philosophy has made a weighty contribution to the correct appreciation of personality By Immanuel Kant the absolute moral worth of the individual person has been made central. Man is a rational being, a law unto himself. His criterion of conduct is so to live that if others followed the same rule of conduct, perfect morality would be possible Such a life depended on the possession of a good will and there is nothing on earth good except a good will

Reverence for the worth of personality is fundamental with Kant. It shines in its own light. The motive for the performance of duty is not personal advantage, but reverence for one's personality Men must treat one another not as means for promoting self-advantage but with that honour which is becoming to the worth of personality.

The consciousness of free choice gives to human beings a kind of individuality which is not possible to beings that lack that consciousness This consciousness is, however, one that is only gradually developed. Hegel said that in early societies only the supreme ruler was recognized as free; but gradually the recognition of freedom became extended to larger and larger units of members, until at last it is acknowledged that all human beings can lay claim to it. Human history is thus regarded as the process by which freedom is gradually acquired, by which individuals know by degrees that they are individuals—*personalities* who have a right and power to shape their own destinies.

IV. *The psychical aspect of Personality*

The psychological view of personality is that it is an

organic unity of cognitive, affective and conative processes. This fact of personal unity is of great importance. It is a preventive against certain mistaken notions of instruction. The teacher must realize that there is no mental receptacle to be filled up with pre digested knowledge. He would know that there are no feelings to be trained and no wills to be strengthened or broken by pedagogical brute force. He would treat the child as a *person*, partly actual and partly potential, who is to be developed to think, feel, and act in the most appropriate and effective way in response to given situations.

The integration and organization of life is through personality. This is applicable not alone to the traditional separate division of the constituents of the mental life, but to the congenital and acquired instincts and habits, motives and attitudes. Personality implies the unified behaviour of a self that is *self-determined, self-determining* and *self-conscious*.

V. *The social aspect of Personality*

Our analysis of personality will be very incomplete if we do not take into account its social aspect. *Personality is essentially social.* As Green has aptly put it "Social life is to personality what language is to thought." Education means the initiation of the individual person into the spirit of his society. It is the social aspect that marks off human life from that of lower animals. Even in the most gregarious species, the instincts that are inherited seem to be in all cases sufficient for the carrying on of their lives. A little may have to be acquired or perfected by the process of what Bladwin calls "organic selection", but in general, new acquisitions are negligible. In human life, on the other hand, each new generation is initiated into the traditions of its predecessors. Hence some sociologists, notably Durkheim, have described education as 'a new birth'—the birth of the social man out of the embryo of the individual.

In order to realize himself, man must be socially effi-

cient and serviceful. Social efficiency includes vocational efficiency, civic efficiency, and culture The complete development of personality is not possible unless an opportunity for the development of distinctive capacities is afforded to all, and all the barriers of social stratification which make individuals impervious to the interests of others and obtuse to the general welfare, are ruthlessly broken down.

To seek one's life is to lose it, and to lose it is to find it. Man finds his self-realization in the service of others. The fulfilment of this social aspect is an absolute necessity as a condition of any true self-completion. An educated man is expected to return to society with usury the gifts with which he has been by society endowed. Personality cannot live within itself to perish with the individual life. It goes forth into the everlasting life of society.

VI *The new spirit in education*

The new spirit in education may be characterized as the temper which is in revolt against the drill sergeant in the school, which aims at the development of the *person* along his own lines rather than at simultaneous class movements. Free discipline, self expression, self-expansion, the play-way, experiments in class liberty, are emphasized as if they enshrine the secret of the philosopher's stone. It is true that this "New Spirit" is not entirely new There were strong men before Agamemnon The influence of Rousseau and Pestalozzi on education was not negligible. Teachers imbued with the new spirit were, however, rare a generation ago; now they are met with in a large number. The school is becoming a place of delight, a fellowship of joy and free activity of happy work and play, good comradeship and love.

It cannot be said that the success of the new methods is fully proved, but there is no doubt that the school is becoming "a home"—a happier place than it has ever been, and the present century, which has been called "The Children's

Century" may witness not only "the liquidation of illiteracy" but also many a revolutionary and amazing improvement in education.

All the new methods agree in one principle. The teacher must learn to look upon the educand less as a chattel and more as a *person* who has to develop along his own lines. Love of the pupil, belief in the pupil, liberty for him to develop his own personality, must rule. The office of education is to assist the educand in discovering his higher self and making himself a better person. All the programmes of child and adult education are being drawn up with a view to providing this broad and liberal outlook. "What is wanted" aptly remarks Professor J. S. Mackenzie "is a combination of the scholar's thoroughness in knowledge and in insight, the craftsman's ideal of practical soundness in workmanship, the knight's ideal of courage and enterprise and the saint's ideal of absolute devotion to what is best".

I. D. TIWARY

Section IV—Science

PANDIT MADAN MOHAN MALAVIYA
Age 30

LIGHT-SCATTERING AND CHEMISTRY

I. Introduction

The sciences of chemistry and optics have ever been on friendly terms with each other. Refraction, absorption, optical activity and magnetic gyration have been the concern of the chemist even more than of the physicist. The scattering of light is, however, the most elementary of all optical phenomena; on the power of the molecule to scatter light depend all its other optical properties. The study of light-scattering is thus of fundamental importance both to physics and chemistry. It was the desire to investigate the structure of molecules as well as the hope of learning something new regarding the nature of radiation that induced me in the year 1921 to undertake a systematic study of the scattering of light in a wide range of chemical compounds under the most diverse physical conditions. Investigations guided by this two-fold aim have occupied me and my co-workers at Calcutta for some eleven years. At a very early stage in our researches, it was noticed that when a chemically pure liquid is strongly illuminated, the diffusion of light due to the fluctuations of molecular density and orientation is accompanied by another and much feebler type of secondary radiation, which differs from the incident light in colour. This phenomenon was first observed in 1923 by Dr. Ramanathan, working in my laboratory at Calcutta. A systematic investigation with many gases, liquids and solids demonstrated the universality of the effect and led in a quite independent way to its recognition as a new species of light-scattering. From the very first, the significance of the phenomenon to the chemist no less than to the physicist was noticed and emphasised.

I think it would be entirely correct to say that in this field of research, it is experiment rather than theory that has pointed the way to progress. That for the observation of

the effect it is essential to work with the molecules of the chemist and not with the atoms of the physicist was a fact which emerged spontaneously from the experimental work Neither the phenomenon actually observed nor its interpretation had in any valid sense been anticipated from theory in advance of the experimental results. It seems proper to emphasize this in view of the statements often found in the literature that the new type of light scattering had been foreseen from quantum principles prior to its actual discovery.

2. Nature of the Effect

We illuminate an optical medium, (which may be a gas, liquid, crystal or glassy solid) with monochromatic light, as for instance the light of the mercury arc filtered through an appropriate screen, and with an instrument of moderate dispersion, examine the spectrum of the internally scattered light emerging from within the volume of the substance. Much the most intense part of the spectrum as visually observed, or less in the case of fluids, is a line in the same position as for the incident light. Accompanying this we have radiations of altered frequency consisting partly of new lines or bands displaced from the parent line and also, in the case of fluids, of a continuous spectrum which envelopes both the parent line and the new or displaced lines appearing in the spectrum. The entire pattern is characteristic of the substance used and moves bodily up or down the scale of frequency when we vary the frequency of the incident radiation.

How do the new radiations of altered frequency arise? From the facts stated, it is clear that they stand in close relation to the more familiar kind of scattering by molecules first recognised by the late Lord Rayleigh as observable in the blue light of the sky. We know from the theory of Rayleigh that the power of a molecule to scatter light is intimately connected with its optical refractivity. It is known also that the refraction of a molecule and its power

of scattering light are due to the presence in it of electrons in optical levels capable of being disturbed or excited by the incident radiation. So long, however, as the frequency of the incident radiation is less than that of the characteristic ultra-violet absorption of the medium, the electrons do not actually pass into an excited condition, but remain bound to the molecule in their normal state. Some, if not all, of the optical electrons in the molecule however are also responsible for the chemical binding together of the atoms in it. Hence, if the light disturbs the electrons, there must also be a tendency for it to disturb the atomic nuclei from their positions of equilibrium. It must be remembered that owing to the great mass of the nuclei, they would be disturbed to a negligible extent by the direct action of the radiation, and it is only the intervention of the electrons which bind the atoms that makes such disturbance possible. The nuclear motion takes the form of either an internal vibration of the molecule or of a molecular rotation, or of both simultaneously.

Purely as a matter of descriptive phraseology, we may say that the scattering process involves, in general, an exchange of energy, linear momentum and of angular momentum or spin between the photon and the molecule, with corresponding changes in the frequency and state of polarisation of the scattered light. If for example, the photon loses part of its energy to the molecule, it would be scattered with a diminished frequency, *per contra*, if the photon gains energy from the molecule, it is scattered with increase of frequency. It is important, however, to notice that the principles of conservation of energy and momentum taken by themselves do not enable the scattering of light with altered frequency to be predicted, for the simple reason that they afford no criterion whether or not the changes postulated can occur. The point appears to deserve emphasis, in view of the misconceptions which have occasionally found expression in the literature of the subject. By way of illustrating this remark, we may draw attention to the fact

that the spectrum of light-scattering by a molecule contains immensely fewer lines than, for instance, its absorption spectrum in the ultra violet region. It is this simplicity that gives the method of light-scattering its special significance in relation to chemistry and for the explanation of which, the conservation principles are wholly inadequate.

3. Significance of the Effect

The change of frequency in scattering is obviously determined by the change which occurs in the state of the molecule. The cases in which the gain or loss of energy takes the form of molecular rotation alone involve relatively small changes of frequency and are, therefore, easily distinguished from those in which molecular vibration is involved. With gases composed of molecules having relatively small moments of inertia such as H_2, O_2, N_2, HCl etc., at not too high pressures, the rotational effects can be resolved into discrete lines displaced from the parent radiation. Usually, however, the lines corresponding to rotational transitions run together into a continuous spectrum which is distinguished by its very imperfect polarisation. This was the form in which the rotational scattering was observed and recorded in my earliest report. The comparatively larger changes of frequency which are observed correspond to the cases in which the molecule takes or gives up a quantum of energy of vibration, with or without a simultaneous change in rotational energy. If we ignore the latter, it follows at once that the frequency changes must represent the characteristic molecular vibration frequencies. Surprisingly enough, this view when originally put forward was received with suspicion by some theorists, but the weight of experimental evidence has compelled its general acceptance. It is to be remarked also that each vibration line may be accompanied by a retinue of rotational components on either side of it. It may also in general possess a fine structure due to the fact that owing to thermal agitation, the molecules in a fluid are not all in the same state, possessing rotational and vibrational energies

Fig. 1.

Fig. 2

Fig. 3.

Fig. 1. Hydrogen (gas)
Fig. 2. Carbon Tetrachloride-polarisation.
Fig. 3. Iso-butane (liquid).

to varying extents, and their characteristic vibration frequencies may not, therefore, be absolutely identical.

By way of illustration of the foregoing remarks, I reproduce a beautiful photograph of the spectrum of hydrogen gas at 30 atmospheres pressure in the visible region obtained by Bhagavantam with a two-prism glass spectrograph and mercury arc illumination (Fig. 1) which exhibits the various features mentioned above. The case of hydrogen is of special interest, because, as was first shown by McLennan, the spectrum indicates immediately the existence of two forms of hydrogen. Table I shows the relative intensities of the chief rotational lines in the spectrum calculated according to formulae given by Manneback and as measured photometrically by Bhagavantam. In computing the relative populations of the molecules in various states, the Boltzmann factor for a temperature of 30°C and the different *a priori* probabilities of two forms of hydrogen (1 : 3) have been taken into account. The agreement is quite satisfactory.

Table I

Transition	PP Series ($K \to K-2$)		Transition	RR Series ($K \to K+2$)	
	Calculated	Observed		Calculated	Observed
0→2	0.124	0.15	0→2	1.666	0.[illegible]
3→1	0.124	0.15	1→3	2.053	2.1
4→2	0.001		2→4	0.310	0.5
			3→5	0.229	0.2
			4→6	0.0098	—

It must be emphasized that from the chemical point of view, it is not only the positions of the lines in the spectra that are important, but also their character, that is to say,

the intensities and contours or width of the lines. In these respects, the different lines in the spectrum of one and the same substance may show extraordinary variations. To illustrate this remark, I reproduce the spectrum of a very simple compound, iso-butane whose spectrum has been recently studied by Bhagavantam (Fig. 3). Further, it is important to note that while the rotational lines are very imperfectly polarised, as has been shown by Bhagavantam with various gases, the state of polarisation of the vibration lines in the spectrum of a substance may vary in an astonishing way from line to line. To illustrate this point, I reproduce the spectrum of the light scattered transversely by carbon tetrachloride observed with a nicol in two perpendicular positions (Fig. 2). Bhagavantam and Venkateswaran at Calcutta have recently made systematic studies of this subject with a great many liquids, and have found several substances giving lines of which some are strongly polarised, some imperfectly polarised and other lines again which are practically unpolarised.

To understand these results we have to consider the question why a molecule should at all scatter any light. The classical explanation for this is that the molecule in the field of the light-wave becomes an electric dipole or Hertzian oscillator which sends out secondary radiations. The imperfect polarisation of the light transversely scattered by a molecule is on this theory explained by the very reasonable hypothesis that the molecule is not spherical and is optically equivalent to a spheroid or to an ellipsoid with three unequal axes, as a consequence of which the field of the light-wave and the oscillating dipole moment induced in the molecule do not always coincide in direction. This hypothesis has many successes to its credit, but it seems possible that depolarisation may also arise in other ways. The suggestion has been put forward by me that a molecule may in certain cases scatter light also in the manner of an electric quadrupole, (alternatively as a magnetic dipole or Fitzgerald oscillator). It is characteristic of either of these types of radiator that

they give rise to a depolarisation of the scattered light even if the molecule possesses spherical symmetry. Observations on the intensity and polarisation of the scattered radiations from liquids and gases using *incident polarised light* may be used to test this idea. Investigations are in progress at the time of writing which have the object of discriminating between the two alternatives stated above, and generally of examining the usually accepted explanation of depolarisation in light-scattering. I mention the matter here, as it seems to me of great importance to the subject of stereo-chemistry and the explanation of optical activity.

4. The Spinning Photon and the Rotating Molecule

If we regard radiation from the standpoint of the classical electro-magnetic theory, it is really difficult to comprehend why light incident on an anisotropic molecule should cause it to change its state of rotation and thus gain or lose spin. Even the quantum mechanics in so far as it is based on the Maxwellian electromagnetics, leaves this point rather obscure. In order to obtain a more satisfactory interpretation, it appears necessary to go beyond the classical field theory and make the hypothesis that the photon or light-quantum possesses an intrinsic spin of its own, equal to one Bohr unit and capable of assuming alternatively a positive or negative sign, but *not a zero value*. In a recent paper, published in the Indian Journal of Physics, Bhagavantam and myself have developed some consequences of this hypothesis, and shown that it affords an instantaneous explanation of the observed laws of the rotational scattering. For instance, the hypothesis explains in a single step why the rotational quantum number of a molecule changes by zero or two units in light-scattering, and also why circularly polarised light scattered by a molecule is reversely circularly polarised in certain cases when observed in a forward or backward direction, and is practically unpolarised when observed in a transverse direction in the same cases. What is much

more important, however, is that the hypothesis of the spinning photon leads to certain new consequences which can be put to the test of experiment and which come definitely into conflict with the existing theories. These conclusions concern the absolute intensities of the rotational scattering and vibrational-rotational scattering, and their relation to the measured intensity and polarisation respectively of the Rayleigh scattering and of the vibrational scattering by molecules. The Kramers-Heisenberg theory of dispersion which has been developed and applied by Manneback to the case of an anisotropic molecule leads to conclusions on these matters which can also be put to the test of experiment but which are definitely in disagreement with the facts. The essential point which is ignored in the field theory is that the results of an encounter between a spinning photon and a rotating anisotropic molecule must depend on the relative sense of their spins before impact. When this is taken into account, the intensities and polarisations of the various lines in the spectra are profoundly modified, and come into full agreement with the observed facts. I give below as an illustration, a table of experimental results obtained by Bhagavantam concerning the depolarisation of the Rayleigh scattering by some simple gases as determined spectroscopically, and as computed respectively by Manneback's theory and from the concept of the spinning photon.

Table II. Depolarisation per cent

Gas	Observed	Calculated Manneback's Theory	Calculated Spin Theory
O_2	4.1	1.7	4.2
CO_2	6.3	2.8	6.7
N_2O	7.7	3.4	7.9

The concept of an intrinsic spin of the photon is that

forced upon us by the facts of experiment, and there is little doubt that it must play an essential role in future theories of interaction between matter and radiation, including especially the theory of phenomena of special interest to the chemist such as optical activity and Faraday rotation.

5 The Vibration of Molecules

The question why molecular vibrations may be excited by light is closely connected with the problem of the nature of chemical bond between atoms, and it is this fact, perhaps more than any other, that makes light-scattering a subject of special significance to chemistry. The quantum theories of chemical binding are yet in the making, and we are yet too much in the dark to be able to put forward a really satisfactory answer to the question raised. In a general way, however, it is clear that an approach or recession from each other of the nuclei of the atoms in a molecule must cause a deformation of the electron distribution in it. It is reasonable, therefore, to expect that a deformation of the electron distribution produced by light would induce a nuclear vibration. Mannebeck has recently discussed the subject theoretically from the standpoint of the quantum mechanics and obtained expressions connecting the nuclear oscillations induced by light with a dependence of the optical polarisability of the molecule on the nuclear distance. His theory presents certain difficulties, one of which is that we are not now in a position to make a rigorous quantitative test of it. Some tentative attempts in this direction are, however, possible and have been made by Bhagavantam using various simple molecules in the gaseous state. In order to explain the optical anisotropy of molecules observed in light-scattering, Ramanathan in 1924 worked out as my suggestion the hypothesis that the atoms in a molecule are optically spherical, and that the anisotropy of the molecule as a whole arises from the mutual action of the atomic dipoles induced by the field of the light-wave. The hypothesis proved reasonably successful, and one of its consequences is that the refractivity of a

molecule is not strictly the sum of the refractivities of the atoms in it, and should show a distinct dependence on the nuclear distance. Adopting this idea, it becomes possible to evaluate the quantities appearing in Manneback's formulae. Bhagavantam has computed the results to be expected for the case of some diatomic gases, and compared the same with his experimental estimates of the intensities of the vibration lines in their scattered spectra. The results are shown in Table III. They exhibit an agreement at least in respect of the order of magnitude.

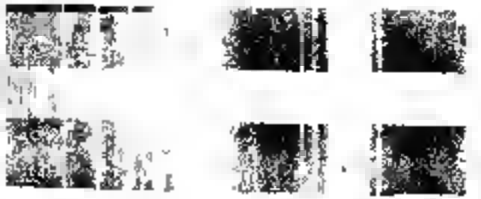
Table III

Gas	H	N_2	O_2
Observed	2.9	0.5	0.7
Calculated	2.6	0.3	1.0

The figures represent the intensity of the vibrational lines as a fraction of the corresponding Rayleigh or undisplaced lines in units of 10^{-12}. Observation shows the vibration lines to be strongly polarised, much more completely in fact, than the theoretical calculations made from Manneback's formulae would indicate. It must be confessed, therefore, that the subject is still in an unsatisfactory state.

6. Relationship to Infra-red Absorption

The method of light-scattering is much more convenient and more accurate to work with than the study of infra red absorption. It makes accessible remote regions of the infra-red spectrum which are otherwise very difficult of access, and also give a wider variety of information. In this sense, therefore, one method may be regarded as replacing the other. Nevertheless, the comparative study of the results obtained by the two methods is of the greatest interest from the point of view of chemical constitution, and in this sense, the two methods are complementary to each other. While



both the methods convey knowledge regarding the modes of vibration and rotation of the molecules, the nature of the information conveyed is different. Infra red absorption essentially depends on the fact that oscillations and rotations of the molecule involve changes in the magnitude or orientation of its static electric moment. Light scattering, on the other hand, depends on the corresponding variations of the induced optical moment of the molecule. We must be prepared, therefore, to find very significant differences in the character of the spectra

Even in the earliest report by Krishnan and myself on the spectrum of benzene liquid, attention was drawn to dissimilarities of the kind referred to above. The much more detailed information now available has thrown light on the origin and significance of these discrepancies. In the first place, it must be remembered that no significant comparison is possible unless the data of both kinds are sufficiently complete and reliable. A new technique has recently been worked out in my laboratory by Dr. P. Krishnamurti by which many faint lines in light-scattering are recorded, properly assigned and measured, which have hitherto been overlooked for various reasons. As an example of the success obtained by this technique I may mention the cases of benzene, pyridine, and piperidine in which 25, 32 and 24 frequencies respectively are recorded instead of the 17, 13, and 11 frequencies obtained by earlier workers. As an illustration of the striking photographs obtained by Dr. Krishnamurti, the spectrograms of benzene, pyridine and cyclohexane are reproduced (Figs. 4, 5 and 6). The results with the new technique establish a far closer correspondence with the most reliable infra-red data than till now has been imagined possible. Nevertheless, there remain very significant differences. In not a few cases, extremely strong infra-red absorptions correspond to extremely weak lines in scattering which are only revealed by the new technique The explanation of these and other differences must prove very illuminating for our knowledge of molecular structure.

The largest dissimilarities between infra red absorption and light-scattering are exhibited by the simplest molecules. As we go up a particular series to more and more complex molecules, certain differences persist, but the resemblances on the whole become much more striking. To illustrate this point, I reproduce the spectra of the simplest hydrocarbons, methane, ethane, propane, butane and iso butane which have been studied very carefully by Bhagavantam (Fig. 7), and give also a comparison between scattering and infra-red absorption for the three cases for which data are available from the work of Coblentz (Fig. 8). A study of these figures will be found very instructive. It must be remembered, of course, that the resolution used in the infra-red work is inadequate for a complete comparison. As an example of the usefulness of such comparison between infra red and scattering data, I will mention the case of methane for which Dennison assumed as fundamental oscillations from the infra-red data, the following frequencies, 4217, 1120, 3018 and 1304. It is clear that this assignment cannot be accepted, and Bhagavantam assigns instead as fundamentals, the frequencies 2918, 1520, 3018 and 1304, and indicates 4217 as a combination of the first and the fourth. There is in addition, an unexplained fundamental frequency 3066 which appears in light scattering, and which presumably is connected with the known optical anisotropy of the molecule which is inconsistent with its assumed tetrahedral structure.

The failure of some frequencies to appear in the infra red absorption, or in the scattering is evidently connected with considerations of symmetry, which often act in opposite ways in the two cases. For instance in linear molecules, a symmetric expansion or contraction would be inactive in the infra-red, but would give a strong line in scattering. On the other hand, a transverse oscillation in a linear triatomic molecule would appear strongly in the infra-red but *may* fail to appear in scattering for the reason that such an oscillation would involve but little change in optical polarisability of the molecule. As very interesting examples, we consi-

Plate III

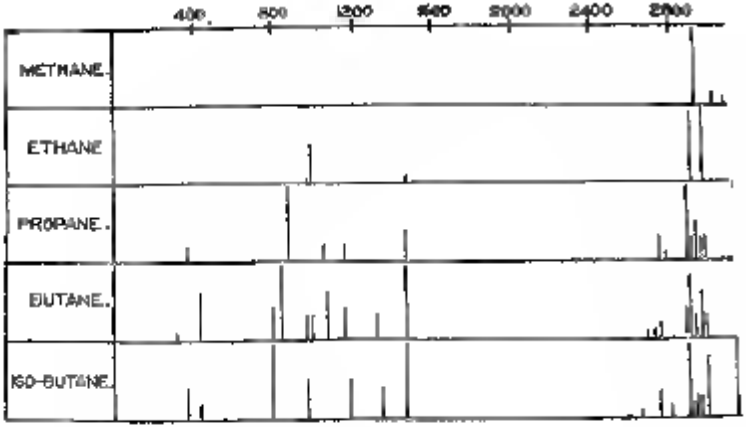


Fig. 7.

der the cases of CO_2 and N_2O. In the former, only the optically inactive frequencies appear in light-scattering. Hence we must assign to the molecule the structure O=C=O. On the other hand with N_2O gas, *two* frequencies 1283 and 2226 appear in scattering the latter very weakly. It is impossible to reconcile this fact with the usually accepted structure N—O—N, and we must assign N—N=O instead as the structure. This agrees with the recently discovered fact that all the three fundamentals of N_2O are active in the infra-red. The 1283 frequency would on this view represent a nearly symmetric linear oscillation of the two outer atoms, while the weaker 2226 would represent an unsymmetric longitudinal oscillation of the central nitrogen atom.

7. Mechanics of Molecular Oscillations

The illustrations considered in the preceding pages, and the great volume of data which is already available make it clear that the geometry of molecular form and oscillation, including especially considerations of symmetry, plays a very important part not only in determining the molecular vibration frequencies but also the intensities with which such frequencies would appear. From the systematic work of Bhagavantam, it is clear that the polarisation of the lines is also connected with the geometry of molecular oscillation, though not exclusively determined by it. The masses and positions of the atomic nuclei and valency of the bonding, that is whether it is single, double, or triple, appear in the main to determine the molecular frequencies. The appearance of a line including its intensity and polarisation depend on the symmetry of the oscillation for the reason that the change in optical polarisability due to molecular oscillation is essentially connected with such symmetry. We must not, however, forget to take into account two other important factors, namely the refractivity or scattering power of the individual atoms in the molecule, and the nature of the atomic bonding, i.e., co-valent or electro-valent, homopolar

or heteropolar. It seems in the highest degree probable—indeed it is very clearly suggested by the experimental evidence—that the two latter factors are of great importance in determining the intensity of the lines in the spectra. It may not always be possible in any particular case, to disentangle the effects of the various factors from each other. The general tendencies are, however, clear from the study of comparatively simple cases, and the more exact quantitative study of such cases must lead to a fuller understanding of the general principles involved.

The influence of geometric form of the molecules on the character of the spectra is very profound. Particularly instructive is the comparison between butane and iso-butane, spectra of which are indicated in Fig. 7. The most striking change is in the position and intensity of the lines of low frequency. Iso-butane shows some similarity in the structure of its spectrum to a molecule of $CHCl_3$, as we should indeed expect from its constitution. While the strong band at 1450 shows no visible change as between butane and iso-butane, the group in the vicinity of 2900 shows quite striking changes.

In the same way, if we compare the spectra of the gases ethane, ethylene and acetylene, we notice a progression of frequency in the intense line evidently ascribable to a symmetric oscillation of the molecule. We have thus a visible proof that the chemist's idea of the single, double and triple bond represents something very tangible, almost mechanical in its nature. More recondite in its nature, but equally interesting is the observation of Bhagavantam that the intensities and depolarisations of these lines also show a striking progression. Numerous other examples of the kind could be quoted. There is also an abundance of experimental illustration of the influence of the nuclear masses, on the frequencies; for instance the transition from the fluorides to the chlorides, bromides and iodides may be mentioned.

Less obvious, though probably much more profound in its theoretical significance is the influence of the transition

from the co-valent to the electro-valent type of binding on the intensities of the lines brought to light and fully discussed by Dr P. Krishnamurti. It is no coincident, according to him, that the compounds which usually give the strongest spectra in light-scattering are those of carbon, the typical illustration of co-valency in chemistry. From the data obtained and marshalled by him, there can be no mistaking the validity of the general principle stated by him that the transition from co-valent to the electro-valent type of binding means a rapid falling off in the intensity. Why this should be so is not altogether clear. The fuller meaning of this principle will repay careful study and research. Very surprising and mysterious also is Dr Krishnamurti's observation that strongly paramagnetic sulphates as for instance ferrous sulphate, refuse to exhibit in light-scattering, the frequencies characteristic of the SO_4 group so strongly exhibited by the diamagnetic sulphates.

11 Significance of Molecular Models

In order to interpret the observed spectra of compounds of known chemical constitution, it is natural to compare them with the behaviour of mechanical models of the molecules. For relatively simple compounds of the type X_2 or X_3 or X_4 or of the type AX_2 or AX_3 or AX_4, the characteristic frequencies may be computed theoretically without excessive labour from suitable models, and as was shown by Bhagavantam in a memoir in the Indian Journal of Physics, we get rather a gratifying resemblance between the observed spectra and the calculated frequencies of vibration of the model. The utility of such computations is many-sided. It enables us in the first place, to estimate the strength of the binding forces between the atoms in the molecule from their known masses and observed frequencies, and to distinguish between single, double and triple bonds. Secondly, it gives strength to the idea that the frequencies observed in light-scattering are chiefly, perhaps exclusively, the fundamental vibration-frequencies of the molecules. Thirdly, the com-

position of the observed and predicted behaviours enables us to correct or determine the choice of model, for instance, whether a triatomic molecule should be considered as straight or as bent. Fourthly, we are enabled from the identification of particular lines in the spectra with particular modes of oscillations of the model, to go further and endeavour to explain their observed intensity and polarisation characters; or, we may reverse this process, and from the observed characters of a line identify the mode of vibration and thus help to fix the constants of the model. Even in more complicated cases, where theoretical computations would be laborious, we may use experimentally constructed models in order to derive at least a fair idea of the expected behaviour of a molecule. The mechanical analogy suggests that an elongated molecule like hexane should behave very differently from a closed ring compound like benzene or cyclohexane, and this expectation is not belied by experience. Broadly speaking, we may divide the vibrations of an extended system of discrete masses into two classes, one of relatively low frequency which we may call the "acoustic series" determined by the general form of the molecule, and the second of higher frequency which we may call the "optical series" which characterise the special groups or links present in it and only to a minor extent are influenced by its general configuration. It is the "optical series" which specially interest the chemist and which appearing with relatively great intensity, have so far received the most attention. The "acoustic" series of low frequency are however also of great interest, though they can only be expected to appear very feebly, if at all, in the spectrum.

In thus recognising the utility of mechanical models, it is well to emphasise also that it can only be a rough approximation to discuss the molecule as a system obeying the classical dynamics. Further, the kind of model indicated by chemical considerations may be too idealised, we are probably not justified, for instance, in regarding the CH_4 or CCl_4 molecule as a perfect tetrahedron or the benzene molecule as a

perfect hexagon, and must not be surprised to find the spectrum exhibiting more lines than are appropriate for such a high degree of symmetry. The greatest and most fundamental difficulty, however, is our comparative ignorance of the real nature of the co-valent chemical bond between atoms. How can its nature best be represented mechanically? Is it merely a bond which resists longitudinal extension, or has it also transverse or flexural rigidity and is this the same in all directions? The facts seem to suggest that the bond has both types of elasticity. For instance, in the spectra of the aliphatic hydrocarbons, there is a band of frequency 1450 which is usually attributed to a transverse oscillation of the C-H bond. This explanation is not without difficulties. Firstly, a transverse movement of the hydrogen atom must produce but little disturbance of the rest of the molecule and only slight variation of its optical moment. The observed large intensity of the band is, therefore, surprising. Secondly, it is not easy to understand how a transverse oscillation of the hydrogen atom can have such a high frequency, about half in fact that of its longitudinal oscillation. If the energy of binding depends on the nuclear distances alone, a transverse oscillation must be of extremely low frequency. That such is far from being generally the case is also shown by the example of the linear triatomic molecule of carbon disulphide; the transverse oscillation of the carbon atom in CS_2 has a frequency 403, while the longitudinal oscillation has a frequency 1576; both were successfully recorded by Bhagavantam as feeble lines in the spectrum of this substance, the transverse oscillation having actually the greater intensity of the two. It is obvious that we have here some very interesting facts which demand explanation. It is to be hoped that the newer theories of chemical binding of atoms based upon the concept of the spinning electron may help us in getting an insight into these puzzling questions.

12 The Chemistry of Carbon Compounds.

Organic chemistry has created a marvellous variety of substances which are a delight to the student of light-scattering, for they furnish him with unlimited material for his investigations. To a physicist, it might seem that the detailed study of simple cases rather than an extended study of the innumerable examples which chemistry offers would lead to fundamental advances in knowledge. Nevertheless, the fascination of surveying a new territory is irresistable, and indeed, for a time the chemical side of light-scattering occupied the laboratory and investigators at Calcutta rather exclusively as is shown by the numerous papers published by Venkateswaran and others in the Indian Journal of Physics. It is permissible now to stop and look round and ask ourselves if the results so far achieved are really reliable.

I will remark here that if the fullest and most effective use is to be made of the method of light scattering, it is necessary to pay attention to a very important point, namely the recording of the *complete* spectrum of a substance, including especially the faintest lines and the elimination of all uncertainties in assignment and measurement. It has already been remarked that fundamental modes of vibration of the molecule which appear strongly in infra-red absorption may be extremely weak in scattering. Unless the weakest lines have been correctly recorded and measured, the nature of the spectrum cannot be fully appreciated, and it is unsafe to draw from it any conclusions regarding the structure of the molecule. It is well-known that while the results of different workers generally agree regarding the stronger lines, there are serious discrepancies regarding the fainter lines. Among the causes of these differences may be mentioned imperfect chemical purity, lack of sufficient exposure, parasitic light and flourescence which suppress the fainter lines, doubtful assignments, overlapping of lines, insufficient spectroscopic resolution and errors in measurement. As already mentioned, Dr. Krishnamurti has developed a new technique

which depends essentially on the critical comparison of the spectra obtained with two filters that weaken but do not completely absorb the λ 4046 and λ 4358 radiations of mercury are respectively, and at the same time clean up the continuous spectrum. This new method together with the use of an iron arc comparison eliminates in great measure, the various possible sources of error and ensures the correct recording of the complete spectrum.

As an illustration of the power of the new technique, taken in conjunction with the results of infra-red spectroscopy to illuminate chemical problems, I shall discuss the results obtained by Dr Krishnamurti with the two substances, benzene, and cyclohexane which are the leading representatives of two great classes of carbon compounds. On a superficial comparison of the spectra of benzene (Fig 4) and of cyclohexane, (Fig 6), it might seem that they were wholly different, and this is what one could legitimately infer from the results till now published. A wholly different story is told when we compare the *complete* spectra of the purest benzene and cyclohexane respectively. Dr Krishnamurti records the following frequencies for benzene liquid

407 (½), 603 (3), 687 (0), 806 (0), 848 (2), 976 (0), 992 (10), 1029 (0), 1081 (0), 1178 (5), 1407 (0), 1477 (0), 1584 (3), 1604 (2), 2411 (½), 2543 (½), 2928 (0), 2948 (1), 3046 (1), 3063 (4), 3164 (½), 3187 (½)

For cyclohexane, he records the following frequencies:

381 (½), 427 (1), 695 (0), 804 (10), 922 (0), 1028 (8), 1156 (1), 1266 (1), 1344 (½), 1444 (5), 2351 (0), 2462 (0)?, 2610 (0), 2662 (1), 2695 (½), 2852 (8), 2889 (1), 2922 (8), 2938 (8).

The infra red absorption maxima for benzene liquid compiled from the published results of Coblentz, Bell, Daugherty and Barnes, are

684 (10), 772 (1), 801 (1), 848 (4), 901 (0), 917 (0), 980 (1), 1027 (8), 1176 (6), 1250 (0), 1115 (1), 1397 (4), 1484 (8), 1600 (1), 1799 (6), 1976 (5), 2257 (0), 2125 (0), 2630 (0), 2907 (1), 3039 (6), 3074 (2), 3095 (2).

The frequencies of the infra-red absorption maxima for cyclohexane taken from the work of Lecomte and of Ellis are the following.

840 (8), 897 (6), 990 (2) unresolved, 1011 (5), 1235 (6), 1325 (½), 1445 (9), 1493 (½) unresolved, 1613 (0), 1667 (1), 1770 (0), 1818 (0), 1887 (½), 2151 (½), 2326 (½), 2860 (5), 2940 (5), 3077 (½)

A scrutiny of these figures reveals an astonishing similarity between the spectra of benzene and cyclohexane For instance, the two strongest lines of cyclohexane 804 (10) and 1028 (8) are both present in benzene; 1028 is the strongest absorption maximum of benzene though only very weakly represented in scattering, while 804 is weakly represented both in the absorption and scattering of benzene The line 1444 of cyclohexane which appears strongly both in scattering and absorption is represented by a pair 1407 (0) and 1477 (0) which appear in benzene, weakly but unmistakably in scattering and with very great strength in infra-red absorption The line 1266 of cyclohexane which appears strongly both in scattering and absorption corresponds to a distinct peak at 1250 in the benzene absorption which is recorded both by Coblentz and by Bell. The line 1156 of cyclohexane appears rather weakly in scattering and not at all in absorption, while in benzene there is a line in the slightly displaced position 1178 which appears strongly both in scattering and absorption. The faint lines at 381 (½) and 425 (1) appearing in cyclohexane lie on either side of the broad faint line at 407 (½) recorded in benzene A faint broad line is recorded at 687 (0) for benzene and at 695 (0) for cyclohexane and corresponds to an extremely strong absorption in the former The line 848 which ap-

pears with moderate strength both in scattering and in absorption of benzene corresponds to an extremely strong infra-red absorption at 840 in cyclohexane which does not however appear in scattering. The line 992 of benzene which is intense in scattering but hardly detectable in absorption is recorded in the infra-red absorption of cyclohexane as a distinct band. It is also recorded as an extremely weak line in scattering, but this may possibly be due in part to the presence of a trace of benzene as impurity. A weak infra-red absorption in the vicinity of 1320 appears both in cyclohexane and benzene and may be identified with a weak line in the scattering of cyclohexane at 1344

It will be seen from this comparison that throughout the whole range of frequencies from 300 to 1500 the differences in the spectra of benzene and cyclohexane are mainly in respect of the *intensities* of the lines, and only to a very minor extent in their *frequencies*. We know of course that both molecules contain a ring of six carbon atoms. There is a general consensus of opinion at the present time that the carbon ring in benzene is practically plane, but that in cyclohexane it may be puckered with the consequence that benzene will possess a pseudo-hexagonal symmetry while cyclohexane will possess a pseudo-trigonal symmetry The small differences in frequency coupled with the very striking differences in intensity of the lines may be reconcilable with a geometrical difference in size and shape. But they appear to me to be wholly irreconcilable with the idea that in the benzene ring, the carbon atoms are bound together in a totally different way from what they are in cyclohexane. A system of alternating single and double bonds, or a system of centric bonds stretched across the ring instead of a simple system of single bonds, would have resulted in a wholly different set of frequencies and cannot in my opinion be reconciled with the facts of the case.

We may now consider the frequencies higher than 1500 which appear in the scattering of the two compounds It is noteworthy that benzene exhibits weakly two frequencies

2928 (0) and 2948 (0) which appear in slightly displaced positions but with great intensity in cyclohexane. These two lines are, as is well-known, attributed to the longitudinal oscillations of the hydrogen atoms, and thus they appear both in benzene and cyclohexane ceases to be surprising in view of the remarks already made in the preceding paragraphs. It has already been remarked that the line 1444 which appears intensely in cyclohexane and is attributed to a transverse oscillation of the hydrogen atoms, is weakly represented in benzene as the doublet 1407 (0) and 1477 (0). This identification is confirmed by the great strength with which this doublet appears in the infra-red absorption of benzene, the peak of absorption in this position being only less prominent than in the aliphatic hydrocarbons. It will be noticed that 1477 is almost exactly one half of 2948. It is characteristic of benzene that it gives two fairly strong lines at 1584 and 1604, the frequencies of which are also nearly one-half of the two hydrogen oscillations of higher frequencies 1164 and 3187 which is also exhibits. It is natural in the circumstances to ascribe the pair 1584 and 1604 to transverse oscillations of hydrogen atoms and the pair 1164 and 1187 to corresponding longitudinal oscillations of the hydrogen atoms. This interpretation is supported by the fact that the pair 1584 and 1604 is unpolarised just as we should expect transverse oscillations to behave. Further, in the infrared absorption of halogen derivatives of benzene we find, the intensity of the pair 1584 and 1604 increases *pari passu* with a diminution in the intensity of 1407 and 1477, clearly showing that both the pairs arise from very similar kinds of oscillation. The alternative interpretation that has been proposed by some writers, namely, that 1584 and 1604 indicate the existence of double bonds in benzene appears to me to be wholly irreconcilable with the facts. If additional evidence against this alternative were needed, one could quote the fact that the hetero-cyclic compounds like thiophene and pyrrol do not show these lines in their scattering.

C. V. RAMAN

THE ACROGYNOUS LIVERWORTS OF THE WESTERN HIMALAYAS

In 1929 the writer published "Liverworts of the Western Himalayas and the Punjab Plain", Part I, giving illustrated descriptions of the Anthoceratales, Marchantiales and Anacrogynous Jungermanniales growing in the Western Himalayas including Garhwal and Almora districts and extending up to Kashmir and the Punjab Plain. Lists of plants occurring in some of the out of the way places like Pangi and Lahul, Spiti, Ladak etc., were also given. Since then the writer's collections of Acrogynous Jungermanniales from these regions have been examined and the present paper gives some of the more general facts about the distribution.

The distribution of Liverworts in the Himalayas is very interesting in several ways. One can study in this region not only the widely differing factor of climate at various altitudes as it effects the distribution of different species but in the case of widely distributed species it is possible to study the effect of this climate on the same species. Some of the species occur at very low levels about 2,000′ above the sea level, but no species comes down to the level, for example, of Lahore where quite a large number of thallose forms are met with. As regards the upper limit, foliose forms have been found at almost as great altitudes as thallose forms though they are not certainly as abundant or common. 12-13,000′ is the usual limit though some species go up to 14-15,000′ and possibly 16,000′. As is the case with the thallose forms the number of species occurring beyond the Himalayas is very small. The writer has come across only 3 species in Zanskar. They are *Anthelia julacea*, *Lophozia excisa* and *Lophozia incisa*. *Mulotheca ovalis* has been recorded from Nubra and *Chiloscyphus inflatus* from Chandar Tal. There are in all about 83 species recorded from this region. Of these 4 appear to be new, and about 40 have

not been recorded from these parts before. The largest genus is *Madotheca* with 19 species. Next comes *Plagiochila* with 14 species, then *Frullania* with 9 species, then *Lejeunea* (in the wide sense) and *Chiloscyphus*, each with 6 species. *Lophocolea* and *Solenostoma* are represented by 4 species each. *Radula*, *Scapania* and *Jungermannia* each has 3 species. The remaining genera are represented each by one species only. *Madotheca* and *Frullania* are the most widely distributed genera and some of their species also are widely distributed. The genus *Plagiochila* is also widely distributed but almost every species is known from one or two localities only. The following are the lists of the species which have been recorded from various parts of the region dealt with along with the localities and the collector. The small Herbarium at Forest Research Institute, Dehra Dun has been examined by Mr. R. S. Chopra and the previously recorded species have been mostly taken from Stephani's Species Hepaticarum.

The writer is indebted to Mr. R. S. Chopra, M.Sc., for his great help in the preparation of this list. Full accounts with illustrations are in course of preparation and will be published shortly.

List of Species of foliose liverworts occurring in the W. Himalayas compiled from various sources

Lejeuneaceae

I	Frullania	1. F. ritusa.		2. F. squarrosa	
		3. F. gracillima.		4. F. Polypterx	
		5. F. pyrifolia.		6. F. Gottwellana	
		7. F. himalayensis		8. F. Gollanii.	
		9. F. Duthiana			
II	Lejeunea	10. L. sp. A		11. L. sp. B	
		12. L. sp. C.		13. L. sp. D	
		14. L. sp. E.		15. L. sp. F	

Madothecaceae

III.	Madotheca.	16. M. decurrens.	17. M. Gamblesana.
		18. M. inflatiloba	19. M. grandiflora.
		20. M. appendiculata.	21. M. acanthola
		22. M. Ferrotenuiana.	23. M. campylophylla
		24. M. Gollanii.	25. M. plumosa.
		26. M. platyphylla	27. M. variabilis.

28. M. augusta. 29. M. hatcheri.
30. M. ovalis 31. M. subcordifolia.
32. M. varia. 33. M. densiretis
34. M. densifolia 35. M. lacinigata

Pleurozieae. Not represented by any species in this area

Radulaceae

IV. Radula 36. R. complanata 37. R. grandifolia
38. R. Dozieana.

Scapaniaceae

V. Scapania 39. S. verrucosa 40. S. parva.
41. S. subalpina.

VI. Diplophyllum 42. D. orientale.

Publiaceae

VII. Blasiaceae 43. B. trichophylla.

VIII. Aneilia 44. A. palacea.

Cephaloziaceae

IX. Mastigobryum. 45. M. triangulum
X. Calypogeia. 46. C. trunicipula.
XI. Cephalozia. 47. C. Gollani

Lepidoziaceae

XII. Chiloscyphus. 48. C. inflatus. 49. C. argutus
50. C. hamatiscypha. 51. C. polyanthus.
52. C. complanatus. 53. C. Gollani

XIII. Lophocolea 54. L. minor. 55. L. heterophylla.
56. L. alata 57. L. bidentata.

XIV. Plagiochila. 58. P. fragilissima. 59. P. nervosa.
60. P. ambigua. 61. P. simplex.
62. P. roundifolia. 63. P. himalayensis.
64. P. Dozieana. 65. P. cavifolia.
66. P. Gollani. 67. P. gracilis
68. P. sinica. 69. P. sp.
70. P. sp. 71. P. sp.

XV. Lepidozia. 72. L. Inclica. 73. L. recisa
74. L. sp. nov.

XVI. Jungermannia. 75. J. elongata

XVII. Schistochila 76. S. circulata 77. S. longiflora.
78. S. purpurea 79. S. brevifolia.

XVIII. Jungermannia 80. J. sp. nov. 81. J. Dozieana.
82. J. tenerrima.

XIX. Southbya. 83. S. Gollani.
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List, showing the distribution of the foliose liverworts in the Western Himalayas.

1	Frullania squarrosa	Mussoorie, 6—7,000′	Kashyap,	Chopra
		Garhwal	"	
		Kumaon	"	
		Chamba-Chuari Rd.	"	
2	F. zetosa	Mussoorie, 6—7,000′	"	"
		Dalhousie 6—7,000′	"	"
3	F. polypterna	Mussoorie	"	Dudgeon
4.	F. gracillima	Chamba 3,000′		
		Murree	"	
5	F. pyrifolia	Khajiar 7—8,000′	Chopra	
		Mussoorie, 4,000′		
		Kashmir	Kashyap	
6.	F. Grevillaeana	Kulu Kanta	Duthie	
7	F. Gollisii	Simla		
8	F. himalayensis	Mussoorie		
9	F. Duthieana	Kedar Kanta		
10.	Lejeunea sp. A.	Mussoorie	Kashyap,	Chopra
11	Lejeunea sp. B	Almora, 6—7,000′	"	
		Mussoorie	"	"
12	Lejeunea sp. C.	Almora	"	
		Mussoorie	"	"
13	Lejeunea sp. D.	Mussoorie	"	"
		Simla	"	
		Khajiar		"
		Locality not noted	"	
14	Lejeunea sp. E	Mussoorie	"	"
		Kumaon	"	
		Simla	"	
		Khajiar		"
		Alwar-Sikandi		"
15	Lejeunea sp. F	Alwar-Sikandi		"
16.	Madotheca sipendi culata.	Mussoorie	"	
		Dalhousie		"
		Kalsi in Sach		"
17	M. cuspidophylla	Mussoorie		"
		Dalhousie Khajiar		"
18	M. Gollisii	Mussoorie	"	
		Loeshley not noted	"	
19.	M. phoenix	Mussoorie	"	"
		Chamba	"	
		Dalhousie		"
20.	M. vavabilis	Mussoorie	"	
21	M. platyphylla	Ragan Valley	Inayat	
		Kashmir	Duthie, Kashyap	
		Ravi Valley	Kashyap	
		Pangi	"	Chopra
		Lahul	"	"

11. M. dentatum	Mussoorie	Kashyap, Chopra	
	Deoora [Tehri State]	Gamble	
	Kagan Valley	Inayat	
	Locality not noted	Kashyap	
13. M. Gambleanum	Tehri	Gamble	
	Kumaon	Kashyap	
	Kulu Valley, 6,000'		+
	Ravi Valley, 6,000'		+
	Pangi	+	
24. M. macrolobum	Kumaon	+	
	Garhwal	+	
	Chamba-Kumaon	+	
	Pangi		+
	Kulu Valley		+
	Alwar, 6,000'		+
27. M. gracillimum	Mirtal (near Simla)	Brown	
	Mundall	Gamble	
	Kagan Valley	Inayat	
	Kumaon	Kashyap	
	Pangi		+
	Dalhousie		+
28. M. Pinnatifidum	Bhajur		+
27. M. acutifolia	Mussoorie	+	+
28. M. angusta	Kashmir	+	
29. M. hastata	Mussoorie		
30. M. crispulifolia	Kashmir—Liddar Valley		
31. M. varians	Kagan Valley		
32. M. denticulatum	Chamba		
33. M. denticulatum	Kumaon		
34. M. ovalis	Nilgiri	Hook. and Thomson	
35. M. lanceolatum			
36. Radula complanata	Pipin pass	Kashyap	
	Kumaon	+	
	Simla	+	
	Mussoorie	+	Chopra
	Dalhousie	+	+
	Alwar Sitrundi	+	+
	Bhajjar	+	+
37. Radula grandifolia	Simla		
38. R. Dumbaea	Simla		
39. Diplophyllum orientale	Ganga Valley 11,000'	Durbin	
40. Scapania verrucosa	Dalhousie	Kashyap	
	Alwar		Chopra
41. S. subalpina	Above Sitrundi	+	+
42. S. parva	Kashmir		
43. Anthelia julacea	Kulu Valley, 11-12,000'		+
	Zanskar		+

44 Blepharostoma trichophylla	Kedar, 10,000'		Chopra
	Sikrundi	Kashyap	
	Gurthar pass, 14,000'	"	
	Ganges Valley, 11-12,000'	Duthie	
45 Marsupella emarginata	Ganges Valley	Duthie	
46. Calypogeia trichomanis	Alwas-Sikrundi		Chopra
47. Cephalozia Gollana	Garhwal	Kashyap	
48. Chiloscyphus rivularis	Chandar Tal	Gamble	
	Kidar Kanta	Duthie	
	Ganges Valley	"	
	Alwas Sikrundi 8-10,000'	Chopra	
49 C. argutus	Churah	Kashyap	
	Locality not noted	"	
50 C. himalayensis	Mussoorie	Kashyap,	Chopra
51 C. polyanthus	Mussoorie	"	"
	Dalhousie-Khajiar		"
	Sikrundi	Kashyap	"
52. C. stamineus	Mussoorie	Gollan	
53 C. Gollani	Mussoorie	"	
54 Lophocolea [illegible]	Mussoorie	Kashyap	Chopra
	Locality not noted	"	
	Lahul		"
55. Lophocolea alata	Dalhousie	"	
56. L. heterophylla	Mussoorie	Kashyap	
57. L. bidentata	Mussoorie		"
58 Plagiochila fruvgenes	Mussoorie	Duthie	
	Locality not noted	Kashyap	
59. Plagiochila asplenioides	Mussoorie	Duthie	
	Garhwal	Kashyap	
	Dalhousie	"	Chopra
60. P. [illegible]	Bhaghot 31,000'	Gamble	
61. P. Mitcenii St.			
P. [illegible] Mitt.	Kot Nag, 12-13,000'	Duthie	
62 P. mandalaensis	Mandali	Gamble	
63 P. himalayensis	Bashar	"	
	Tragbal pass	Duthie	
64. P. Duthieana	Kashmir, 8,000'	"	
65 P. Gollani	Mussoorie	Gollan,	Duthie
66 P. gracta	Simla	Long	
67 P. Nana	Simla	"	
68 P. sp.	Chamba Bazaar	Kashyap	
69 P. sp.	" "	"	
70. P. sp.	Kumaon	Kashyap	
71 Plagiochila circinalis	Kashmir	Duthie	

72. Lophozia excisa	Zanskar	Kashyap	Chopra
	Gurdhar pass	Kashyap	
73. L. incisa	Alwas-Silrundi		"
	Zanskar	"	"
74. L. sp. nov.	Chamba	"	"
	Gurdhar pass	"	
75. Jamesoniella elongella	Dalhousie		"
	Kumaon	"	
76. Solenostoma lanceolata	Alwas-Silrundi		"
77. S. crenulata	Kulu Valley		"
78. S. purpurata	Silrundi		"
79. S. sp. nov.	Simla	"	
80. Jungermannia sp. nov.	Alwas-Silrundi		"
	Dehra Dun		"
81. Jungermannia suthiana	Kashmir	Duthie	
82. J. tenuisima	Mussoorie	Gollan	
83. Southbya Gollani	Mussoorie	"	

SHIV RAM KASHYAP

RADIO-ACTIVE ALLANITE FROM BAHEA, RANCHI, INDIA

Allanite has been known to occur in various parts of the world particularly in Greenland, in Norway, in Sweden and in Finland, as also in smaller quantities at Miask in the Urals, and in certain parts of Germany, Scotland and America. It has appeared under various names[1] at various places and so often that Mellor humorously[2] suggests that it might almost be named *polyonymite*—having many names. Although monazite sands of Travancore[3] and Ceylon are well known in India and some rutilvein also find mention[4] in some standard works of reference, Indian Allanite has not attracted much notice. There is mention of the occurrence of Allanite in the pegmatites of Nellore district and near Palni in Madura district, Madras[5]. In Bihar and Orissa it occurs in the village of Bahea in the Ranchi district[6], not very far off from Benares.

The subject of the present paper is a short account of some work carried out with Allanite from Bahea, Ranchi. No analysis of Indian Allanite seems to have been carried out or attempt made to utilise it industrially. I understand from Mr. D. C. Nag and Mr. M. K. Ray (to the latter I am indebted for samples with which my work is being carried on) that there are collections of boulders at places, some of them weighing well over one hundredweight each, and that the deposit is likely to be massive and extensive. In view of

[1]Newton Friend—Text Book of Inorganic Chemistry, Vol. IV by H. F. V. Little, p. 219. Allanite or Orthite, bucklandite, uralorthite, bagrationite, scandium orthite, ceriorthite, bodenite.

[2]Mellor—Comprehensive Treatise on Inorganic Chemistry Vol. V, p. 569.

[3]Tipper—Rec. Geolog. Survey, India, 1914, 44, 188. Ch. of Comm. 1915, 34, 205.

[4]Newton Friend—ibid. Vol. IV, by Little, p. 219.

[5]Fermor, L. L.—Rec. Geolog. Survey, India, Vol. LVII, 1918-1923, Mineral Products of India. Rare Minerals, p. 171.

increasing use of cerium and its compounds it is worth while investigating the deposit and its industrial possibility The Ranchi Allanite is of somewhat vitreous black colour and almost opaque. Thin sections under the microscope are strongly pleochroic and show evident inclusions of some green and pink minerals, with evidence of radio active nature which was confirmed by actual electroscopic observation (see below) The hardness is between 5 to 6, and its specific gravity was found to be 3.42. In the powdered state the mineral looks greenish grey. My friend, Prof. K. K Mathur[6], of Benares Hindu University, has kindly consented to give a short note on the mineralogical character of the sample supplied to him by me. I shall restrict myself in this short paper particularly to the group analytical side only.

There is no easy solution for quantitative separation of the constituents of a rare earth mineral[7] Indeed no one scheme is suitable for the different rare earth minerals and each one has to be dealt with in its own way and a scheme has to be worked out for the particular case after repeated trials. In the present case the scheme, detailed, below, has been evolved after reference and trials of the methods detailed in several standard works[8]. I shall not enter into the details of merits and demerits of the different procedure as discussed in the cited works, but give as briefly as possible the actual process followed, and then give a summary of the average results obtained which I may say were fairly concordant. I fully realised the truth of what Sir William Crookes[9] said as to the magnitude of the work and extreme

[6]Prof K. K. Mathur's note will appear along with this.

[7]Newton Friend—Vol IV, by Little p. 371 "Separation of Rare Earth Elements from One Another A general solution of this problem is not yet known. As a rule the cerium is determined and an approximate separation of the remaining elements into cerium and yttrium groups effected."

[8]Mellor, Newton Friend, Levy Sir William Crookes, Scott Treadwell-Hall Stillman's Engineering Chemistry Browning and some others.

[9]Sir William Crookes—Introduction to S. L. Levy's "The Rare Earths. Their Occurrence and Technology"

difficulty of separating the rare earths with any degree of quantitative accuracy

Experimental—Finely powdered mineral (using slow careful grinding in a large sized agate mortar and pestle) was carefully weighed out into a fused silica beaker with a cover, and treated with concentrated hydrochloric acid by placing the beaker on a hot plate so as to evaporate to dryness and completely disintegrate the mineral and convert the gelatinous silica to white powdery form, the process being repeated thrice over before finally extracting with hot dilute hydrochloric acid, filtering and washing The precipitate with the filter paper was burnt in platinum basin and weighed and checked by treatment with pure hydrofluoric acid (or pure ammonium bi-fluoride) and sulphuric acid or usual. This gave the amount of SiO_2, which was found to be most often 32 38 per cent (and sometimes 32.17). The residue after treatment with fluoride was negligible and sometimes nil. The small residue when left over did not contain any titanium. Further investigation, of this residue when any is in progress.

The filtrate after SiO_2 separation was then treated with a little concentrated nitric acid and then, while boiling with ammonium hydroxide until just smelling of ammonia The precipitate consisting of the hydroxides of iron and aluminium with those of the rare earths was filtered of and washed The filtrate was utilised for the estimation of Calcium by titration of precipitated oxalate and also gravimetrically as sulphate. There was no magnesium in the mineral and the amount of manganese present was very small in quantity CaO determined was most often 13 96 (sometimes as low as 13.67)

The hydroxides on the filter paper was redissolved in a small quantity of hot dilute hydrochloric acid, pouring back the acid over and over again. The slightly acid solution with the wash water was then heated and to the warm solution was added oxalic acid, sufficient to precipitate the whole of

the rare earths as oxalate. This was then allowed to settle down and cool, for at least four hours or better left overnight, and then filtered and washed with water slightly acidulated with oxalic acid.

The oxalate precipitate, on the filter paper, consisting of the rare earths, was then burnt in a platinum basin and weighed as total rare earths. This came to 16.94 (or even 17.03) per cent. It must be remembered that the cerium earth though present as cerous, it is here weighed as CeO_2. This Rare earth (total) separated from the other commoner constituents was subjected to further treatment and separation as detailed later on.

The filtrate from the oxalate precipitate contained iron and aluminium (and possibly zirconium if any?) in solution. The oxalic acid was completely decomposed by evaporation and treatment with concentrated sulphuric acid. Iron and aluminium were then determined in the usual manner, volumetrically and also gravimetrically. Again sometimes the oxalic acid was decomposed in sulphuric acid solution by permanganate, the solution was then reduced by $SnCl_2$, treated with $HgCl_2$, solution filtered, titrated for iron by permanganate in presence of concentrated solution of Sodium Sulphate or Sodium Phosphate and dilute sulphuric acid. This of course gave only total iron both the ferrous and the ferric combined. For the determination of the ferrous portion the following procedure was adopted. A quantity of finely ground mineral (taking usual precautions to avoid oxidation during grinding[20]) was taken in a platinum crucible and to this was added a quantity of ammonium bifluoride and sufficient quantity of concentrated sulphuric acid, diluted with an equal volume of water, to cover the whole mass, the crucible being placed in a larger crucible or beaker containing calcite and dilute hydrochloric acid so as to create an atmosphere of CO_2 and thus prevent oxidation of ferrous to ferric during the dissolution of the mineral which is generally

[20] See Washington-Rock Analysis

completed within five minutes (if not more than 0.1 gram mineral is taken) at water bath temperature. The inner platinum crucible content were then quickly transferred to a larger platinum basin and titrated with standard permanganate after addition of sodium sulphate or phosphate. This gave the ferrous and the cerous together. The cerium content is determined independently, so that by calculation we get the Ferrous. From the total iron already determined we get now both the ferrous and the ferric present in the mineral. The results thus obtained are as follows:—FeO=11.26 per cent; Fe_2O_3=5.62 per cent and Al_2O_3=21.36 per cent.

Coming back to the rare earth portion, the ignited oxalates were redissolved in hydrochloric acid and the excess of the acid was driven off by evaporation. The slightly acid dilute solution was then treated with dilute, $Na_2S_2O_3$ solution, boiled well, again a little more sodium thiosulphate solution added for completion of precipitation, boiled and allowed to settle down[11] for about two hours and filtered and washed with a very dilute solution of sodium thiosulphate. The precipitate containing ThO_2 was burnt in a platinum crucible, redissolved in hydrochloric acid, excess acid driven off as far as possible and cerium precipitated as oxalate, burnt and weighed as ThO_2. This was found to be always below one per cent and be between 0.55 to 0.60 per cent. ThO_2=0.60 per cent.

It should be mentioned here that a preliminary examination of the powdered mineral by Alpha-Ray Electroscope as used in my experiments with Radio active Columbite[12] and also by the modified Emanation Electroscope as used in my investigation of Rajgir Hot Springs[13] gave definite evidence of radio-activity. The radio-activity was found associated

[11] Newton Friend, Vol. IV, by Hirde, p. 531. Method of Chydenius etc.

[12] Nag N. C.—Radio-active Columbite from Gaya District. Quart. Jour. Geolog. Min. and Metall. Soc. India, Vol. II, Pt. I, 1929.

[13] Radio-active Hot Springs of Rajgir—Shortly to be published in the Transactions of the Bose Institute, 1931-1932.

with the thorium present in the mineral. The rare earths after separation of the thorium was found to be free from radio-activity.

The filtrate, after treatment with sodium thiosulphate and filtering off the thorium portion, was made just alkaline and the rare earths precipitated, filtered and washed. The precipitate was redissolved in sulphuric acid and the excess acid driven off by evaporation over hot plate. The solution in water was then taken in a glass beaker, and to this was added while stirring a saturated solution of K_2SO_4[14] until precipitation was complete, and then the whole allowed to settle down and allowed to cool for about two hours, with occasional shaking[15]. The cerium group double sulphate precipitate was then filtered off and washed with cold saturated solution of K_2SO_4. The filtrate containing the terbium and yttrium group earths was treated with dilute alkali and the hydroxides filtered off and washed. The hydroxide precipitate on the filter paper was again redissolved in hydrochloric acid, avoiding excess. From the dilute HCl solution, the earths of the terbium-yttrium group were precipitated as oxalate, filtered off after standing overnight, washed burnt and weighed. This gave for terbium-yttrium group earths —0.65 per cent.

The double sulphate precipitate of cerium group earths was dissolved in hydrochloric acid, precipitated as hydroxide by alkali, filtered washed and finally redissolved in just sufficient HCl. The HCl solution was made alkaline with dilute caustic soda and a rapid current of chlorine[16] was passed through the alkaline liquid holding the precipitated earths in suspension. The precipitate was filtered off, redissolved in HCl solution, made alkaline again and treated with chlorine as before, and filtered and washed. The final precipitate on the filter paper was redissolved in just sufficient HCl, and

[14] Newton Friend, Vol. IV, by Little, p. 336, Klaproth, Berzelius, etc.

[15] Bettendorf, Annalen, 1891. Marignac Muthman, Lecoq de Boisbaudran, etc.

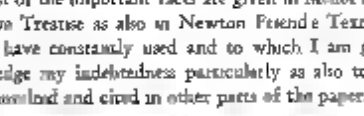
[16] Moissan Browning, etc.

to the slightly acid solution was added oxalic acid to precipitate the cerium salt in solution, allowed to stand overnight, filtered washed, burnt and weighed as CeO_2; from this the amount of Ce_2O_3 was calculated =13 96 per cent.

The filtrate and wash water collected after cerium earth precipitation (chlorine treatment in alkaline medium) was made acidic and boiled to drive off all chlorine. Finally this solution was treated with oxalic acid and after allowing the precipitate to settle for sufficient time, filtered washed and burnt and weighed This contained Lanthanum as well as praseo and Neo-dymium as evidenced by absorption band spectra[11].

Total for this group was 1.07 per cent.

From the foregoing it will have been noted that I have made no attempt to deal with the historical and theoretical sides connected with the discovery of the rare earth elements, which though fascinating is too complicated and would serve no useful purpose in my present case. A full bibliography with most of the important facts are given in Mellor's Comprehensive Treatise as also in Newton Friend's Text Book which I have constantly used and to which I am glad to acknowledge my indebtedness particularly as also to other works consulted and cited in other parts of the paper.



Two grams of rare earths obtained from the Allanite from Ranche were converted to chloride and made upto 40 cc with distilled water. A spectrograph was obtained on Ilford Panchromatic Plate. The thickness of solution was 3 mm. The most prominent lines and bands are easily recognisable.

[11]Newton Friend Vol. IV, by Little, p. 228 et seq.

[12]Further investigation for the separation of the elements in the different groups, here obtained will form the subject of subsequent papers

Summing up experimental results, I get the following:—

Per cent		Mol. Proportion		Mol. proportion divided by greatest common factor = 0.09
SiO_2	12.18	by 60	0.138	6
CaO	13.95	by 56	0.249	
FeO	3.24	by 72	0.184	
MnO	trace	$R''O = 0.163$		4
Fe_2O_3	5.62	by 160	0.035	
Al_2O_3	21.36	by 102	0.209	
Ce_2O_3	18.96			
La				
	1.07			
Pr. dy				
Neody				
Yt. group	0.65	by 330	0.046	
ThO_2	0.69	$R_2'''O_3 = 0.281$		3
H_2O	1.16	by 18	0.10	1

Total determined 99.71 (18)

It will be seen from the above that the formula of the mineral may be expressed as very closely approximating to —

$$4(CaO, FeO).\ 3\{Fe_2O_3, Al_2O_3, R_2O_3\}.\ 6SiO_2,\ H_2O.$$

E standing as that case for rare earth elements, which confirms the view that allanite has Epidote structure corresponding to —$4R''O.\ 3R_2'''O_3.\ 6SiO_2,\ H_2O$.

Though the quantity of thorium present in the mineral may not be probably sufficient to make it worthwhile for gas mantle manufacture, yet the high percentage of cerium present is important for future development. The use of cerium alloys, as mischmetal, is cigarette and gas lighters may be mentioned. Cerium glass introduced by Crookes is transparent to luminous rays but cuts off all ultra-violet and 30 per cent of the heat rays, a fact which is of very great scientific and practical importance. The manufacture of some of these glasses require on less than 20 per cent of Cerium Nitrate as raw material. Further use of the rare earths as catalysts, in photography, in dyeing and in medicine

are attracting attention. Cerium salts, if found in large quantity and cheaply manufactured, may one day be ultilised with advantage in tanning. These are only a few avenues to indicate where Ranchi allanite deposit might become useful, and an Indian industry may be created.

N. C. NAG

VOLCANIC ACTIVITY OF THE COASTAL TRACTS OF BOMBAY, SALSETTE, AND BASSEIN

The lavas of the Deccan Trap are remarkable for their persistent flatness throughout the greater portion of their area including the whole of the Bombay Deccan, Berar and the Malwa plateau. They exhibit an equally remarkable uniformity of chemical composition which has been brought out by the researches of H. S. Washington[1]. The rocks of the coastal region in the Bombay presidency show a deviation from these features, but these rocks have not been properly investigated. The object of this paper is to describe a number of types discovered during a traverse of Bombay, Salsette and Bassein in the months of March and April, 1930, and to study their relationships among themselves and with the predominant plateau basalt of the Deccan Trap.

In a communication on the occurrence of bitumen in the Bombay Island Dr. C. S. Fox[2] drew attention to the peculiar character of the rock of Malabar Hill. To quote his words, 'it weathers well and rings when struck with a hammer like a phonolite. It is not used for road metal owing to the glass-like sharpness of the angular fragments.' His identification of the rock which is based on certain old analyses does not appear to be quite accurate. The geology of Salsette was studied by K. A. K. Hallowes[3] but this author did not make a critical study of the rocks and did not discover their wide departure from plateau basalt. Professor H. C. Das Gupta[4] gave a petrographic description of a 'white trap' from Dharavi, Bombay, but the first accurate descrip-

[1] Bull. Geol. Soc. Amer. Vol. XXXIII 1922.

[2] Rec. Geol. Surv. Ind. Vol. LV Pt. 1, p. 124.

[3] Geology and mineral resources of Salsette. Poona (1922).

[4] "Notes on the geology of the Bombay island." Calcutta Univ. Journ. Dept. Sci. VIII, Pt. 3, p. 371.

tion of rocks from this region was given by Dr. Krishnan[5] who described a specimen collected by Dr. Fox under the title 'Granophyric trachyte from Salsette Island, Bombay.' It will be shown in the following pages that this is not an exceptional occurrence, but that the rocks of the coastal region generally show a departure from the normal plateau basalt type of the Deccan Trap, and also exhibit considerable variation among themselves.

Description of Rock Groups

In the following description constant reference has been made to the numbers of rocks and slides preserved in the department of geology of the Benares Hindu University. A complete list of these is given in table III. The chemical analyses of rocks and the calculation of their norms were carried out by the second author and have been given in tables I and II respectively. The hand specimen of a rock and its thin section bear the same number.

(1) *Gabbros with a glassy groundmass.*

Rocks of this group represent the plutonic phase of the basic magma of this region. They are characterized by the presence of varying amounts of glassy matter occurring interstitially or as groundmass with large crystals of labrodorite and augite. The glassy parts contain microlites of lath shaped felspar. The colour of the glass varies from reddish brown to deep brown. Iron ore occurs in grains and stout bars. In hand specimens the rocks are coarsely crystalline and gabbroid in appearance. Glass is indicated by the dull black patches among the shining cleavage surfaces of the crystallized minerals. The principal exposures of this rock occur in the lower western slopes of Nale Sopara Hill[6] (specimen No 51. *See* microphotograph in Plate IA), and in low ground in the vicinity as shown in the map (*See* map, plate

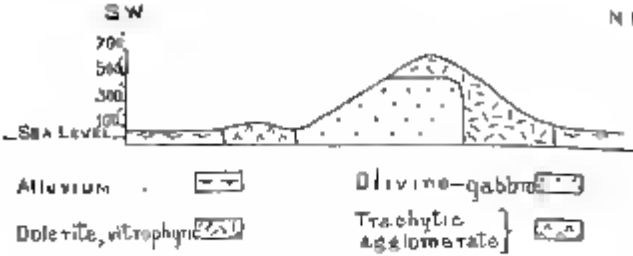
[5] Rec. Geol. Surv. Ind., Vol. LXII, Pt. 1, p. 371.

[6] The hill one mile north-east of the Nale Sopara railway station bears no name. Its highest point is 822 feet. For convenience of reference the authors have named it Nale Sopara Hill.

No. II). They are minor intrusions in the basaltic rocks of this region. Another broad dyke-like intrusion on which the P. W. D. Inspection Bungalow near Shoyapada in Bassein stands consists of similar vitrophyric gabbro (specimen No. 21). Its contract with the basalt of the plain to the west (specimen 49) can be observed. Near the contract half-down the slope the intrusive rock becomes dolerite (specimen No. 29). Chemical analysis and norms of these three rocks and of 31 are given in tables I and II.

(2) *Dolerites with and without glass.*

Dolerites either occur as a medium grained phase of gabbro as indicated above in the case of specimen 29, or they constitute the mass of the long and broad intrusions of the open country east of the railway line in Bassein. Remnants of these are often indicated by the N. W. S. E. ridges which end against the Tansa river in the one inch topographic sheet of the survey of India No. 47A/15. They are often capped by basalt and disappear under the high jungle-covered hills to the south-east. Microscopic sections of rocks of this group often show a variable amount of glass which like the gabbro either occurs interstitially or forms a vitrophyric texture with porphyritic crystals of labradorite and augite, *see* microphotograph of 32 in plate IA). An interesting relationship is seen at Nala Sopara Hill. Here a dyke of vitrophyric dolerite (specimen 32 and 61) cuts across a mass of gabbro which also contains interstitial glass, and appears partly to overflow it forming a little cap which preserves the underlying gabbro from rapid disintegration. (*See* map, plate II and section AB of diagram No. 1)



Chemical analysis of 61 and the corresponding norm are given in tables I and II.

The mode as determined on Shand's stage is given below:—

Vitrophyric gabbro-dyke No. 61		*Gabbro No. 31*
Plagioclase	27.0	30.9
Pyroxene	20.0	30.9
Iron ore	10.1	11.2
Glassy ground-mass	42.9	27.2
TOTAL	100.0	100.0

It will be noticed that nearly half the rock is glassy by volume, and the crystallized minerals are smaller in size in the intrusive dyke than in the associated plutonic phase (specimen No. 31) the mode of which is given opposite for comparison. The nature of glass in these rocks will be discussed later. It is palagonized and includes microlites of felspar. The minerals are often corroded by glass. Iron ore is present in long bars and skeleton crystals.

The dolerite of Nale Sopara Hill is dark in colour, compact and resistant to weathering. It breaks with a splintery cleavage and conchoidal fracture due to the presence of large

amount of glassy matter. Similar vitrophyric rock with variable amounts of glass occurs in the subbroad summit of the 577 feet hill, 6 miles east of the Virar railway station.

Olivine dolerite occurs in the spurs of hills near Sativa in Bassein.

(3) *Basalt.*

Compact basalt forms the slopes and tops of the high jungle-covered hills in Salsette and Bassein. Of greater interest are its occurrences in low ground in the coastal tracts. Mention may be made of those localities where otherwise basalt is scarce. It was observed forming a junction with the granophyre of Madh near the water edge west of the Salsette fort and is present in the plains east of Madh. It also occurs on the southern shore of Dawali in Salsette. Boulders of basalt were seen in the plains of the salt pans of Salsette. In Bassein the low plain near the railway line shows outcrops of basalt in numerous places. A chemical analysis and the corresponding norm of basalt No. 49 are given in tables I and II. Specimens of amygdaloidal basalt were obtained from the 720 feet hill, 4 miles east of the Virar station, and from the neighbourhood of Sativa in Bassein.

(4) *Andesites.*

Reference has previously been made to a description of the rock of Malabar Hill by Dr Fox. It is a compact black rock with a sub-conchoidal fracture and breaks into sharp angular fragments. This is apparently due to the abundance of glassy matter which forms about 41% of the groundmass by volume.

A microscopic examination of specimen No. 53 b from this hill shows a few small phenocrysts of plagioclase felspar (andesine-labradorite) and twinned augite. The minerals of the groundmass which carries glass are small laths of oligoclase-andesine and augite forming an intersertal texture typical of andesites. An appreciable amount of iron ore is present in the form of granules and the groundmass is dusted with

iron ore. The dark-brown to violet brown glass which forms a considerable portion imparts a black tinge to the rock which may otherwise have had a lighter colour Isotropic green and yellow patches occupy the interstices in the ground and are probably chlorophaeite and palagonite respectively A chemical analysis of the rock is given in table I and the corresponding norm in table II The mode of the rock, measured on Shand's scale, is given below

Plagioclase	26.2
Augite	21 6
Iron ore	9.7
Secondary minerals	1 1
Glass	41 1
TOTAL	100 0

The norm shows that the ratio calc /- ferric=66'34 and the rock is, therefore, dosalic. Adopting Washington's[2] criteria and nomenclature for andesites the rock may be called andesinandesite From a purely qualitative point of view also the rock has the mineral composition and texture of an andesite.

It is perhaps necessary to offer a word of explanation in view of the difference between the new chemical analysis of the rock of Malabar Hill and the one by Tween[1] both shown in table I The latter shows an abnormal percentage namely, 27: 75 of Al_2O_3, and the total alkali is rather low Magnesia is reported to be absent Since there are clearly recognizable grains of pyroxene in the rock section magnesia can not be absent Possible sources of error in the older analyses have been fully pointed out by Washington and need not be discussed here It is interesting to note that an analysis by Washington[3] obtained between Race Hill and Sewri

[1] Amer Jour of Sci. Fifth Series, Vol V, No. 30, p. 467-474, 1923.
[2] Mem. Geol. Surv Ind., Vol. V, p. 1866.
[3] Bull Geol. Soc Amer., Vol XXXIII, p. 774, 1922

given in table I, compares well with that of Malabar Hill and Washington's rock 11, therefore, also an andesite.

The lava flow of Malabar Hill is also seen in Cumballa Ridge and in the high ground of Worli to the north.

A specimen from the low mound north of Gursi, 3 miles west of the Bassein Road railway station shows macroscopic and megascopic characters similar to those of Malabar Hill. This is possibly the remnant of an andesitic lava flow in this area. Another group of andesites comes from the neighbourhood of Gokhrem in Bassein, east of the railway line. Specimen B 3 is compact and dark in colour but other specimens are of a light grey colour. A microscopic section shows innumerable phenocrysts in a black typically andesitic groundmass. The ferro-magnesian minerals are augite and hypersthene. Most of the felspars are corroded and encroached upon by glass. The groundmass shows microlites of felspars in places showing flow banding round the phenocrysts. Chemical analyses of B|3 and the corresponding norms are shown in tables I and II. The rock is clearly an andesite.

(5) *Acid and sub-acid intermediate rocks.*

There are three large areas in Salsette where rocks of this group occur

(a) Rhyolites and granophyres of the Madh area

(b) The Khandivali quartz-trachyte,

and (c) Rhyolite and granophyre of the Utan-Dongri hills.

(a) *The Madh area.*—This lies four miles west of the Andheri railway station and is reached by crossing the ferry at Versova. The prominent hillocks are the elevations 126 feet and the ridge to the south on which the Salsette fort stands. The lateral extent of the rocks is about three square miles. The steeper aspect of the hills is towards the south and they decline to the north-east.

The rock of the 126 feet elevation is amygdaloidal, showing a horizontal flow banded arrangement. This is sug

gestive of a flow in this area. The hill of the Salsette fort appears to be in the nature of a minor intrusion with possible localized flows.

Specimen No. 1 comes from the top of 126 feet hill and is a vesicular rhyolite. In thin sections the rock shows a microfelsitic texture. The vesicles are ow-oriented and are filled with a yellow mineral. The specific gravity of this secondary mineral is 2.72 and the hardness is 2 to 3. It evidently belongs to the chlorite group of minerals. The analysis and norm of rock No. 1 are given in table I and II.

Specimen No. 5 taken from a point half way between the ferry and the 126 feet top is a porphyritic rhyolite. The phenocrysts consist of euhedral corroded crystals of quartz and orthoclase felspar. Some crystals of the latter are isotropic and are, therefore, sanidine. There are brown, nearly opaque, hematitic patches surrounding small grains of black iron ore. The groundmass is micro-felsitic in texture. The chemical analysis and norm of this specimen are shown in tables I and II. A microphotograph is shown in plate IB.

Specimen No. 7 shows patches of magnetite and hematite which in a hand-specimen appear as dark spots distributed uniformly over the rock. They probably represent the remnants of some ferromagnesian mineral which has disappeared by reaction with the magma.

The rhyolites and granophyres of Madh are of a light grey or cream colour. They are as a rule soft and friable under the hammer. The rock sections described above fully indicate the variations met with in the area. The ground mass varies from a micro-felsitic to granophyric texture. Specimen No. 6 is an agglomerate of pink and white colours. The individual fragments are of all sizes up to an inch and are highly kaolinised.

Daraoli lies north east of Madh and is also reached by a boat. In the lower parts the beach is made up of a calcare-

ous grit, showing rounded pebbles and foraminifera. The upper parts of the hill are made up of a highly kaolinised rhyolitic agglomerate of pink and white colours. Higher up rock of uniform texture similar to the specimens described from the Madh area can be seen.

(*b*) *Kharadiwadi.*—The description of granophyric trachyte by Krishnan has already been referred to. The exposure in the Kharadiwadi quarry shows two distinct flows with a dip of 10° to the west. The upper flow is about 40 ft thick. The report from the quarryman is that in a trial shaft the bottom of the lower flow was seen about 40 feet below the junction with the top flow, and that below it mud was encountered. This hole is now covered up with debris and the report could not be verified by personal examination. If it is correct the combined thickness of the two flows would correspond to the elevation of the hill and the bottom of the lower flow would lie at the level of the salt pans to the east.

A microscopic examination of sections 11 (*a*) and 11 (*b*) gave the following results:

	11 (*a*)	11 (*b*)
Quartz	14.1	10.3
Felspar	70.24	76.6
Pyrite	1.6	0.0
Apatite	1.6	2.1
Black iron ore	0.0	3.1
Secondary minerals	12.3	7.0
TOTAL	99.8	100.0

The texture of the rock is orthophyric rather than trachytic, since stout laths of felspar make up the larger portion of the rock. As accessory minerals black iron ore and hematite are present.

(c) *The Dongri Uim area.*—This is the largest exposure of rocks of this group. It is about 5 miles long in the north-south direction and about 2 miles wide. The general appearance of the mass is that of a minor intrusion parallel to the coast but in the north-west there are indications of an interesting flow surface dipping towards the sea.

The structure of the rocks is micro-felsitic to micrographic. Occasionally microlites of felspar are flow-banded round micropegmatitic patches (slide No. 17). The rocks are granophyres and rhyolites with occasional flow texture.

It should be observed that the three areas described above rise above the sea to a maximum height of 309 feet, at a point north-west of Dongri and have their elongation parallel to the coast. They are separated from the main basaltic hills of the Thana division by the plain of marine denudation and alluvial deposits on which the salt pans are situated. Since these masses are in the nature of minor intrusions and lava flows it appears that they represent a phase of volcanic activity subsequent to the formation of the plain of marine denudation.

The specimen described from Dharavi by Professor Das-Gupta[18] is either trachytic or more probably rhyolitic in composition considering the high degree of 'silicification' noticed by the author, and belongs to this group.

The soil of the rocks of this group supports a typical vegetation, a characteristic plant which flourishes in abundance was identified by the second author as Anacardium catapa.

(6) *Dykes of trachytic agglomerate.*

These are, as a rule, highly decomposed rocks pinkish in colour. They form long dykes of agglomerate making prominent ridges in the surrounding low plain. The principal masses occur east of the railway line in Bassein and are shown in plate II. The rocks are much kaolinised and

[18] Loc. cit.

stained by ferruginous matter. Thin sections show a kaolinised mass coloured reddish brown. In clear patches a felsitic groundmass is observed. The chemical analysis of a comparatively less altered specimen No. 40 is given in table I, and the corresponding norm in table II. They show that the rock is a trachyte. Its relationship to other rocks will be discussed later.

(7) Sedimentary Beds

Well known sedimentary inter-trappeans occur on the west coast of Bombay. The Nilemore Hill north-west of the Nale Sopara railway station appears to be composed of sedimentary beds dipping to the west. It also includes a clayey rock of yellow and brown colour which is probably a highly decomposed facies of rhyolite or trachyte.

DISTRIBUTION AND FIELD RELATIONS

The distribution of the various rock types and their field characters may be summarised here. The fine grained *basalts* constitute the hills which rise to 900–1,000 feet and represent the dominant plateau basalt type of the Deccan Trap. There is some evidence to show that it probably also forms the bottom rock of the alluvial flats. *Dolerites*, holocrystalline or with a certain percentage of glass, are the constituent rocks of minor intrusions which form long, broad ridges, and traverse the undulating plains of Bassein in a N. N. W. direction. A pronounced dyke of the latter kind is the vitrophyric dolerite intrusion of Nale Sopara hill in which the percentage of glass is 43 by volume. The magma from which this dyke is derived is represented by the associated *gabbro* of the same hill in which the amount of uncrystallised matter is considerably less in quantity. Dykes of *trachytic agglomerate* appear to emanate from Nale Sopara Hill (*see* map Plate No. II). Both from field relationships and from theoretical considerations regarding the nature of the glass of the gabbros and the dolerites which would represent the residual liquor left after the crystallisation of

augite and calcic felspars it appears probable that these types represent the glassy magma squeezed out from a mass of the same type which gave rise to the rocks of Nale Sopara Hill. The upper flow of Malabar hill, Bombay, which extends to Cumballa and Warli, is an *andesite* and the low mound of Girij in Bassein is also andesitic in nature. Andesite also, occurs at Gokhivre in Bassein. Barring these exceptions all the hills and mounds which occur west of the railway line or generally west of the salt pans of Salsette and Bassein are composed of *acid or sub-acid intermediate rocks.*

Attention may here be drawn to the field relationships of rocks shown in the geological map of plate II. Basalt is clearly the oldest formation into which the others are intrusive. The vitrophyric dolerite younger than gabbro and the trachytic dykes, since it has a sharp intrusive contact with both. The relation between the masses of gabbro and the trachytic dykes is not equally clear. Small patches of rocks have been shown in low ground wherever they were observed in the alluvial plain.

Nature of glass in the Gabbro of Nale Sopara Hill

It is possible to calculate the silica percentage of interstitial glass from the data obtained by geometrical and chemical analyses of the gabbro (specimen No. 31) of Nale Sopara Hill. Assumptions have been made with regard to the silica percentages and specific gravities of plagioclase, augite, and iron ore, the chemical analysis of the specimen is given in table I.

Mineral (1)	mole Vol. (2)	Specific gravity (3)	Weight per 100 c.c. of rock (4)	Fractional weight of silica (5)	Silica in 100 c.c. of rock (6)
Augite	31	3.23	100.15 gms.	0.48	46.06 gms.
Plagioclase Albite Anorthite	31	2.66	17.46 "	0.59	48.6 "
Iron ore Gypsum and concentrated glass	11	5.17	56.87 "	0	0
	27	d	27 d "	x	27 d x "
		3.00	307 gms.	.46	138 gms.

From column (4) by adding and equating we get,

$$100 = 27d + 259.46$$

or $d = 2.24$

From column (6) by adding, equating, and substituting the above value of d we get,

$$138 = 27 \times 2.24 \times x + 94.66$$

or $x = .68$

The percentage of silica in the glassy groundmass is, therefore, 68, and its density is 2.26. Owing to the number of assumptions involved in the calculation the results are not quantitatively accurate, but there is no doubt of the indication they afford with regard to the comparative nature of the liquid in which crystals of augite and labradorite were suspended. It was far from being basic and during the period of the suspension of the crystals in the magma any process which brought about a separation of the liquid would immediately give rise to a very much less basic differentiation product. Attention has already been drawn to the associated trachytic dykes which the authors believe to have been derived from the parent magma of Nale Sopara hill by a deformational process akin to filter-pressing.

Age of the Coastal Igneous Activity

It has been shown in this article that the rocks of the coastal areas of Bombay, Salsette, and Bassein offer an in-

teresting contrast with the dominant lavas of the Deccan trap. There are a number of considerations which have a bearing on their respective ages. Both the lava flows and the glassy residues of rocks of the coastal region point to sub-aerial or possibly sub-aqueous conditions during the period of eruption. This leads us to the inference that the coastal plain was in existence at the period. It is of some importance to investigate whether the floor of the alluvial plain consists of denuded Deccan Trap. The authors have found some evidence in support of this view which has been mentioned in the foregoing pages. We have also to remember that the andesite of Malabar Hill was poured out on unmistakable sedimentary beds. Considering all this a certain amount of time must be allowed subsequent to the gigantic vulcanicity of the Sahyadri Range for their denudation to the low level of the coastal plain, before the lava flows off Malabar Hill, Khandavadi, and Nale Sopara Hill made their appearance. The early investigators have very rightly grouped this phase as the upper-most division of the Deccan Trap[11], but there is a possibility of an appreciable gap between the middle and the upper divisions, and it is by no means certain that the Cardita beaumonti beds of Sind fix the upper time limit for the igneous activity of the Bombay coast. There is at least a possibility that it may be of a much later date.

The authors desire to express their thanks to Dr. Mata Prasad of the Royal Institute of Science, Bombay, for numerous facilities during the period of field investigation.

[11] R. D. Oldham. Geology of India, p. 262, 1893.

TABLE I

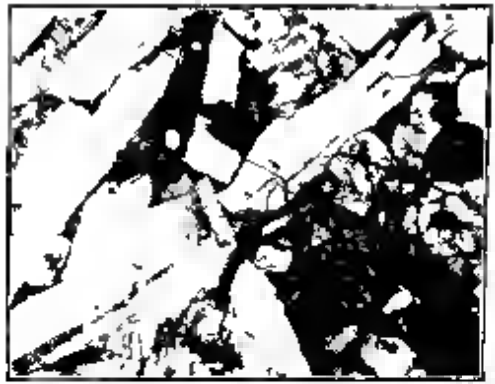
Chemical Analyses

	Andesite Malabar Hill	Andesite Bhandup Pass Hill & Sion (Parbhangan)	Andesite Malabar Hill (Trap)	Andesite Colaba	Rhyolite Mahim	Granophyre Mahim	Trachyte Kalbadevi	Nepheline Syenite Sewri Hill	Nepheline Syenite Malabar Hill	Nepheline Syenite Sewri Hill	Nepheline Syenite Bandra Hill	Nepheline Syenite Bandra Hill
No. of Specimens	10 (6)	(Sri ...)	(Sri ...)	10	1	1	40	11	10	21	10	49
SiO_2	55.12	51.39	55.00	54.11	61.84	71.24	61.13	46.62	44.41	46.34	65.24	61.72
Al_2O_3	15.44	14.34	20.72	17.91	12.51	11.34	19.19	14.79	11.16	20.14	17.12	16.79
Fe_2O_3	3.72	4.24	4.92	2.12	1.14	2.10	0.52	0.14	0.31	1.30	6.30	7.79
FeO	5.14	10.05	3.88	4.14	0.11	2.87	0.41	11.14	11.74	8.27	10.78	6.74
MgO	2.76	1.65	0	0.79	2.17	Trace	Trace	0.90	1.14	1.71	0.14	0.45
CaO	5.31	9.46	1.80	4.98	1.72	Trace	Trace	10.10	4.44	11.10	0.25	10.34
Na2O	3.54	5.43	2.14	2.93	4.41	1.14	4.44	1.40	3.10	3.94	4.44	1.14
K2O	4.79	1.14	2.14	2.07	4.30	5.14	3.11	0.14	0.71	4.44	4.76	1.15
H2O+	4.41	1.40		0.14	1.93	0.11	4.51	0.17	0.51	0.11	nil	nil
H2O−	0.21	0.48			0.91	0.14	0.11	0.24	0.24		nil	nil
TiO2	1.44	0.63		1.14			0.8	3.14	1.14	1.14	0.70	0.14
P2O5	0.14	0.64		0.43			nil	0.11	0.14	0.43	nil	nil
MnO				0.11			0.41	0.12	nil	nil	nil	nil
Cl					0.01	0.47						
Total	100.14	100.32	100.01	100.17	100.35	100.72	100.10	100.14	99.79		100.00	99.54

TABLE II

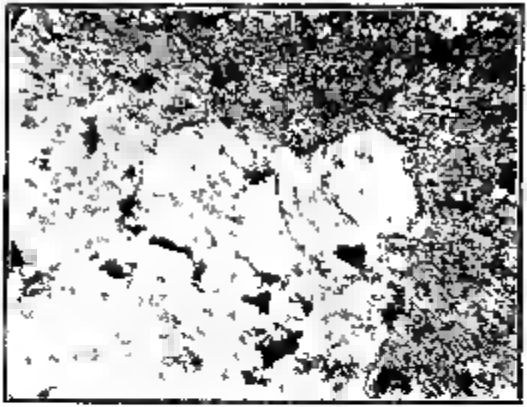
Norms of rocks

Rock No.	18(b)	Ankare (Wolongitoi)	Rock of Mukhar Hill (Tuma)	36	1	6	44	61	63	81	87	40
Quartz	0.62	4.20	01.10	0.76	01.96	0.1.70	01.10					6.43
Orthoclase	3.00	7.71		13.31	13.79	19.70	20.10	2.71	0.90	3.34	1.19	
Albite	39.38	21.10	0.35	34.41	14.10	32.97	01.77	34.10	20.10	24.41	28.22	33.41
Nepheline			1.34					3.41				
Anorthite	01.34	20.19		01.92	1.01			01.52	24.46	18.21	34.10	21.02
Corundum			10.00		0.00		0.06					
Diopside	10.16	10.10	0.71 (NO Sio)	4.74	0.50			22.01	10.22	1.16	10.41	21.10
Hypersthene	11.00	17.76		0.03					13.11	7.45	11.91	
Acmite			0.10					14.64				
Magnetite	0.34	0.10		6.10	3.01	0.74	1.10	0.71	4.37	3.57	0.03	1.37
Hematite					2.11		6.16					
Ilmenite	0.74	1.10		0.16				0.35	1.31	0.00	1.37	0.70
Apatite	0.10	0.34		0.10						0.10		
Calcite					0.11							
Pyrite						3.34						
Total	98.31	93.41	94.21	99.00	100.71	100.61	99.30	101.17	99.02	100.15	100.19	98.00

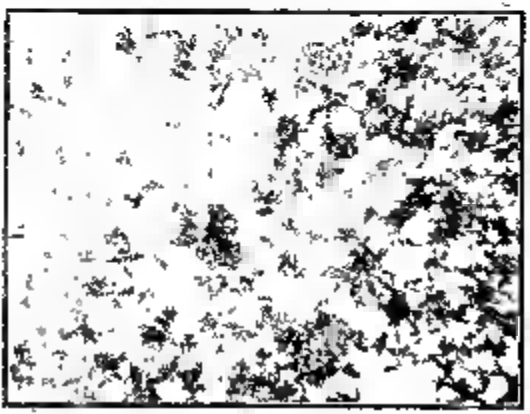


No. 61.—Gabbro with interstitial mesostasis of glass. Nale Sapara Hill, Bassala. (×20.)

No. 62.—Gabbro dyke with large laths of bipyr. in a glassy groundmass which contains small rounded grains of augite and a crystal of bipyr. Owing to the large amount of glass the rock looks more like a dolerite than gabbro in hand-specimens. Nale Sapara Hill, Bassala. (×20.)



No. 8.—Porphyritic rhyolite with felsitic groundmass. Malik Sahotra. (×20.)



No. 9.—Granophyric rhyolite show ag quartz and kaolinized felspar. Malik Sahotra. (×20.)

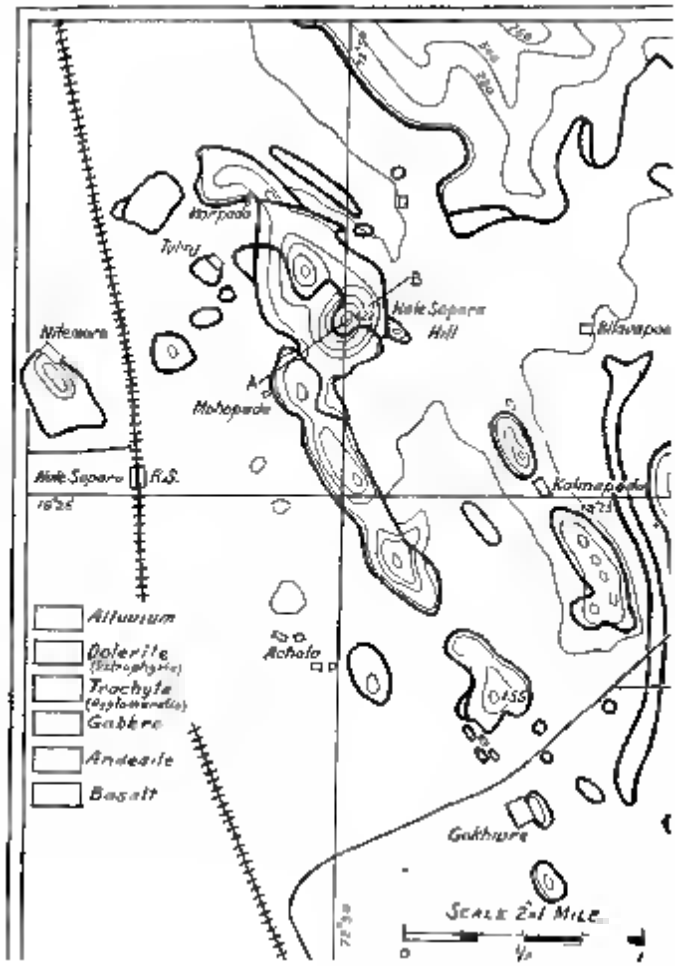
Table III

List of rock specimens

NOTE—Place names and elevations have been taken from the inch topographic sheets of the Survey of India Nos. 47 A/15 16, and B/13

No.	Name with specific gravity in brackets		Locality
1	Vesicular rhyolite (2.44).	Salsette	E. N. E. of Malh, summit of hill, 124 feet
2.	" "	"	Western steep slope of the hill of specimen 1
3.	Granophyric rhyolite (2.41)	"	Western steep slope of the hill of specimen 1
4.	Rhyolite (2.34)	"	½ mile north-east of Salsette fort
5	Porphyritic rhyolite (2.37)	"	Half way between the elevation 124' at Malh and the fort to the east.
6	Rhyolite agglomerate (2.44)	"	East-north-east of Malh
7	Rhyolite (2.30)	"	On the beach ½ mile west of Salsette fort.
8	Vesicular rhyolite (2.25)	"	Near ferry, western coast of Malh
9	" "	"	Dongri Hill 124'
10.	Granophyric rhyolite (2.30)	"	Near specimen 7
11 (a) & (b)	Orthophyric quartz porphyry 11 (a) 2.64 11 (b) 2.31	"	
12.	Calcareous grit	"	Mandshisti quarry 4 miles east of Malad railway station.
13.	Vesicular basalt (2.87)	"	Near the beach at Dongri.
14.	Rhyolite agglomerate	"	Near ferry, eastern coast of Malh
15	Granophyric rhyolite (2.31)	"	Top of the hill at Dongri.
16.	Granophyre	"	Two miles south of elevation 157' Dongri.
17	Amygdaloidal rhyolite (2.40)	"	Elevation 186' N. W. of Dongri.
18.	"	"	Elevation 132', S. W. of Uran.
19.	Rhyolite (2.46)	"	Elevation 267', S. E. of Dongri.
20.	Porphyritic dolerite (1.00)	Bombay	S. E. of 267' hill, Dongri. Low level of hill, 720' 4 miles E. N. E. of Virar railway station.
21	Vitrophyric gabbro (1.31)	"	F. W. D. Inspection Bungalow near Bhayandar. Top of the summit.
22	Basalt	"	Basalt boulders on hill 177' 4 miles E. N. E. of Virar railway station
23	Trachyte (2.31)	"	Low hill 1 mile S. W. of Bhayandar.
24.	Vitrophyric dolerite (1.01)	"	Elevation 177'. Refer to specimen 22.
25	Laterite rock	"	½ mile S. W. of elevation 620' east of Nala Sopara railway station.
26.	Dolerite with secondary glass (2.92)	"	Top of elevation 720' (Refer to specimen 21)
27	Dolerite with secondary glass (2.92)	"	Top of elevation 177'. (Refer to specimen 22)

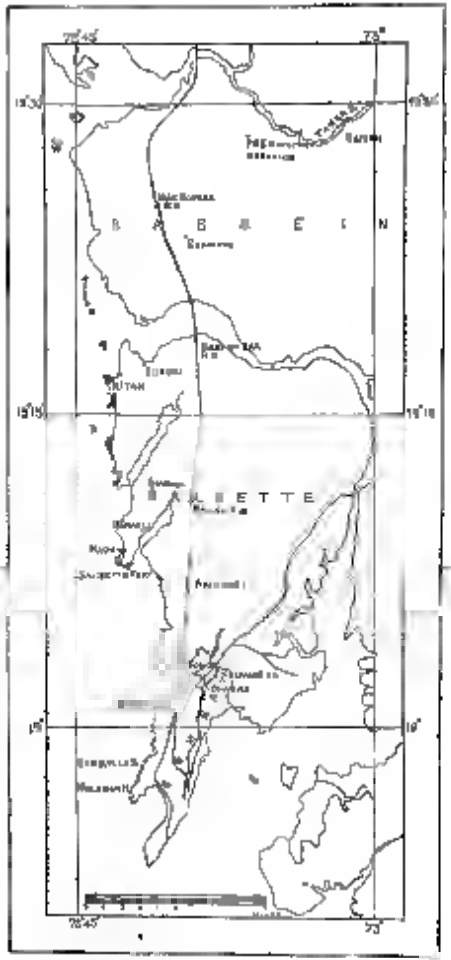
No.	Name with specific gravity in brackets		Locality
28.	Gabbro	Same as	Between elevation 720' and the P. W. D. Inspection Bungalow at Mayapada, near the waterfall.
29.	Dolerite with interstitial glass (3.00)	"	Half-way down the western slope of the Bungalow (See 21).
30.	Decomposed dolerite	"	Nilamore Hill, near Nale Sapara railway station.
31	Olivine Gabbro with interstitial glass (3.00)	"	Half-way down the western slope of Nale Sapara hill (See 21).
32.	Gabbro dyke with interstitial glass (2.94)	"	Top of hill 422' (See 27)
33	Ophiolitic dolerite (2.98)	"	Western slope of hill, 577' (See 32).
34.	Intermixed yellow clay	"	Nilamore Hill.
35	Amygdaloidal basalt (2.78)		Top of hill 720 (See specimen 28).
36.	Ophiolitic gabbro (2.81)		East of Mahapada, near Nale Sapara railway station.
37.	Basalt (2.94)	"	Side of hill 120' (See specimen 28)
38	Amygdaloidal basalt	"	Bed of river Tawa near Hot Spring Vajrabai, Bodan.
39	Kaolinized rock	"	Nilamore Hill
40.	Trachyte (2.34)		Hill N. W. of Kalmapada near Nale Sapara railway station
41.	Kaolinized lahar with ferruginous scoriaceous (2.28)		Nilamore Hill.
42.	Amygdaloidal basalt (2.76)		Top of hill 772' south-east of Sahrar.
43.	Gabbro with interstitial glass		Exposure in low ground at Vira-kapada near Nale Sapara railway station.
44.	Dolerite	"	Top of hill 738' (See specimen 30)
45	Dolerite with interstitial glass	"	Half-way between 120' hill and the P. W. D. Inspection Bungalow near Mayapada
46.	Andesite (2.80)	"	Elevation 170' north of Gurja
47	" (2.81)		" " " " "
48.	Basalt (2.93)	"	Low hill one mile S. W. of Hill upada.
49.	" (3.00)	"	Low level west of the P. W. D. Inspection Bungalow near Khaya pada.
50.	"	"	Near specimen 46.
51	"	"	Top of hill 101' east of Virat railway station.
52	Black rock with mechanical fracture (2.32)	Bombay	Low level of hill, east of Kalwale railway station
53.	Olivine-dolerite (2.99)	Same	Side of hill 772', S. E. of Sahrar.
54.	Gabbro with interstitial glass	"	Same as 31
55 [a]	" (b) Anthracite-coal (2.81)	Bombay	" " Malabar Hill upper flow


Nilawara
Mohopada
Hale Sapara Hill
Bilawapa
Kalmapada
Hale Sapara R.S.
Alluvium
Dolerite
Trachyte
Gabbro
Andesite
Basalt
Alhala
Galthura
Scale 2 to 1 Mile

No.	Name with specific gravity in brackets		Locality
60.	Andesine-andesite (2.78)	Bombay .	Lava flow Cumballa Hill.
61.	Vitrophyric dolerite (2.90)	Bassein	Top of 622' hill, east of the Nale Sopara railway station
B/1.		,,	
B/2.—Andesite	.. ..	,, ..	Near Gokhivre.
B/3.		,,	
	(B/1-2.70, B/2-2.69, B/3)		

K. K. MATHUR
P. R. JAGPATHY NAIDU

Plate III



THE "CORONA PRESSURE" PHENOMENON IN GASES SUBJECTED TO ELECTRIC DISCHARGE IN SIEMENS' TUBES

The problem arose out of an investigation on the occurrence of certain characteristic inflections in the final sections of a number of pressure time curves, which were distinctive of the progress of the decomposition of nitrous oxide produced at different pressures in electric discharge due to alternating electric fields[1]. During these experiments it was observed incidentally that at the instant of the application of the secondary potential to the discharge tube which was filled with a nitrogen oxygen mixture at about half an atmosphere pressure, a sudden pressure rise of about 2 cms Hg was produced. After this the pressure increased comparatively slowly, and became constant in a few minutes. A precisely similar, initial sudden fall of pressure followed by a slower pressure change was observed just after the cessation of the discharge. As a result of a number of careful observations it was concluded that no chemical changes (which might lead to pressure variations) were produced in the above gaseous mixture under the discharge. The observed sudden pressure changes were therefore to be ascribed to some physical factor associated with the production of the discharge in the gas.

A similar effect was noticed by Farwell[2] in an electric discharge produced between a wire and a metallic cylinder which were fixed coaxially. Farwell[2], Kunz[3], and Warner[4], have considered that these initial pressure changes produced just when the discharge was switched on and off, were far too rapid to be simple thermal effects.

In his first theory of the phenomenon Kunz[3], suggested that the pressure rise resulted from an increase in the number of particles in the system as a result of the ionisation of the

gas under the influence of the discharge. This view has been criticised principally by Arnold[6], and by Tyndall and Searle[7]. Tyndall and Searle ascribe the pressure rise to the heat generated in the gas. The characteristic suddenness of the pressure rise has been attributed to the distribution of the heat over the gas space as a result of the 'electrical wind' associated with the ionic movements in the gas under the applied fields. They have further pointed out that any pressure rise in the gas due to 'electrical wind' in ordinary discharges is inconsiderably small. It is interesting to note that Arnold[6] observed that an initial sudden rise in the pressure could be produced by merely heating the central wire in a wire-in-cylinder type discharge tube. Arnold therefore concluded that the effect was entirely due to heat. Furthermore, he has shown that the currents calculated from the number of ions as indicated from the pressure rise would be far in excess over those actually observed.

Warner[8] has observed, however, that the initial pressure rise produced under the discharge was about five times more rapid than that produced by heating the central wire. Further, in a system like a wire-in-cylinder corona tube the voltage gradient in the neighbourhood of the inner wire is far higher than that across the rest of the space in the discharge tube. The ionisation of the gas is comparatively intense near the wire, and only a small proportion of these ions reach the outer electrode as the corresponding field is weaker. Warner considers that this can account for the small values of the observed currents flowing through the discharge tube. Recently Pazel[9] has investigated the corona pressure phenomenon from an experimental standpoint, and has come to the conclusion that it is not entirely a thermal effect.

Anderegg[10] has observed this effect in air subjected to a discharge in the Siemens' ozoniser. Anderegg has tacitly assumed Kunz, later electrical theory of this phenomenon, in an explanation of certain variations in the value of the

corona pressure, which he observed when the discharge was allowed to run for some time

The following experiments were carried out principally to ascertain if this pressure rise due to a discharge in the Siemens' tube could be considered independent of the thermal effects of the discharge in the gas.

Experimental Procedure

The gas exposed to the discharge was contained in the annular space between two coaxial tubes sealed together in the manner of a Siemens' ozoniser. The central tube was filled with mercury which formed one electrode. A glass jacket over the outer tube of the ozoniser was filled with mercury during experiments described in Part I, and with a colourless electrolyte solution during later work (Part II). This last jacket constituted the second electrode. The ozoniser was connected on one side to a supply of the gas later exposed to the discharge stored in a gas holder. The gas was carefully dried by leading over a number of tubes filled with phosphorus pentoxide. On the other side the ozoniser was connected with a mercury manometer, and with a Töpler pump. Single phase alternating currents of frequencies 150, and 137 cycles per second were delivered by small rotary convertors, and were transformed up to the required potential over the range 6000–14000 volts (r. m. s.). The potential applied to the reaction vessel was measured by a Kelvin-White instrument, and was kept constant within 1 per cent by hand regulation of the resistance in the primary circuit of the transformer The current flowing through the reaction vessel was indicated by a milliammeter of the dynamometer type.

The inner electrode was cooled by immersing in it a thin walled glass vessel through which a stream of water was flowing, similarly the outer electrode was cooled by surrounding it with a jacket carrying a continuous stream of water Separate streams of water necessitating the use of

two thermometers in each stream, were employed in order to obtain efficient cooling. At the entrance and exit of the water cooler associated with the high tension electrode two short lengths of copper tube were inserted in the stream and connected to the high tension electrode. No appreciable current could therefore flow through the water in the cooling vessel. The rate of electrode cooling was indicated by the volume in c.c. of water flowing per minute past the high tension, and the low tension electrodes in separate streams.

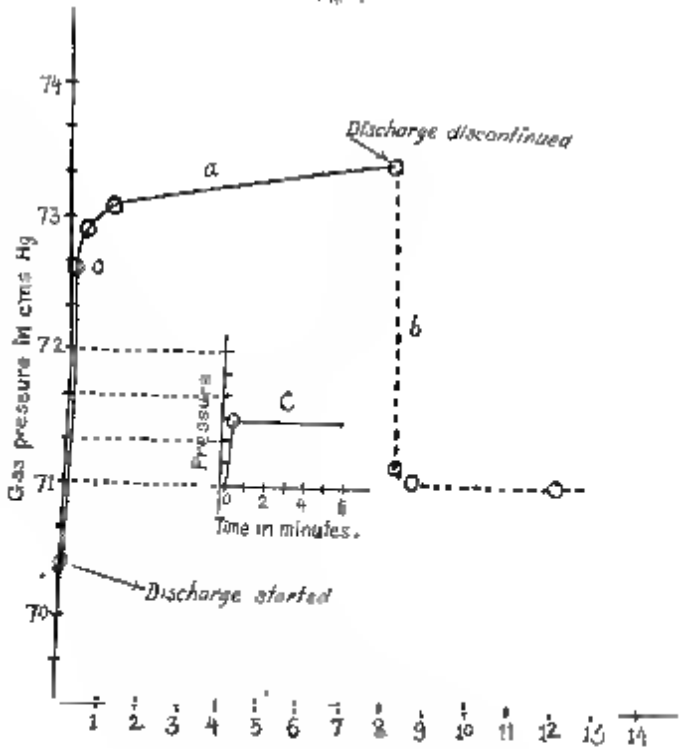
The dimensions of the two ozonisers used in earlier experiments (Part I) were as follows:—

Ozoniser	A	B
Outer diameter of the outer electrode	2.5 cms	2.4 cms
Inner " " " "	2.36 "	2.2 "
Thickness of the glass wall	0.1 "	0.1 "
Outer diameter of the inner electrode	1.37 "	1.33 "
Inner " " " "	1.33 "	1.33 "
Mean length of the electrodes	33.9 "	33.5 "
Volume of the annular space in c.c.	86.8	76.1
Width " " "	0.42 "	0.33 "
Capacity between the surface of the electrode walls in micro-microfarads	41.0	44.0
Capacity between the surfaces of the annual space in micro-microfarads	44.5	47.0

The initial pressure rise appeared almost instantaneously with the application of the secondary potential to the ozoniser. By placing the secondary switch close to the manometer, and by taking a preliminary observation of the pressure-rise to be recorded the interval between the application of the secondary potential and the observation of the pressure rise was reduced to 10, and in some cases to 5 seconds.

The required potential was applied to the ozoniser at a known instant, and the value of the increasing gas pressure was observed at successive intervals. A similar procedure was adopted in order to follow the pressure fall after the discontinuation of the discharge. In order to compare the initial pressure changes when the discharge was turned on and off, for a given value of the applied voltage, the rising

Fig. 1



Time in minutes of exposure

Curve a, b 18400 volts (r.m.s.)

" c 8400 " "

Operator A

pressure, and the corresponding falling pressure curves are plotted with a common origin, and on the same time axis (except in fig. 1).

The Results

Part I

It will be seen that every one of the pairs of the pressure-time curves shown in figs. 1–7 possesses two distinct sections characterised by a marked difference of gradient. These are respectively the initial, sudden "corona pressure" rise or fall, and the subsequent slower change of pressure. The abrupt change in the slope of the curve, e.g., at 'O' in either of the curves *a*, *b*, in fig. 1 corresponding to the commencement of the second stage of the slow pressure change is quite noticeable

The pairs of curves in any of the figs. 1-3 refer to a constant value of the gas pressure and of the applied P D In these experiments the mean rate of electrode cooling was reduced from 311 to 58 c.c. of water flowing per minute. It is interesting to see that almost the only effect of this variation is to increase dp_2, the pressure change in the second section of any of these curves This is also to be noticed from the curves in fig 7. It is also of interest to observe that as a result of rapid electrode cooling, dp_2 in the second section is practically eliminated in the curve *c* in fig. 1

It is evident from the above results that dp_2 is almost entirely a heat effect of the discharge in the gas. The initial corona pressure, dp_1, is however not affected appreciably by these large variations in the rate of the electrode cooling (cf. Tables 1-3) This indicates that dp_1 may be considered to be comparatively independent of variations of the rate, at which the heat produced by the discharge in the gas, is conducted away from the system.

It is also interesting to examine the curves in fig 3. As a result of very slow electrode cooling the pressure rise dp_2 in these experiments was much too great to follow till

the gas pressure became constant as in other cases. The sharp inflexion at 'X' with which the second stage commences is rather well marked in these curves. It is also to be noticed that the pressure rise dp_1 due to heat is comparatively slower in the beginning, i.e., immediately after 'X' and becomes pronounced a little later. Since the electrode cooling was more rapid, this effect is observable to a much less extent in the corresponding section of the curve in fig. 2. This indicates that the full heat effect in the gas does not set in immediately after the commencement of the discharge, that is, during the initial period in which the corona pressure rise appears.

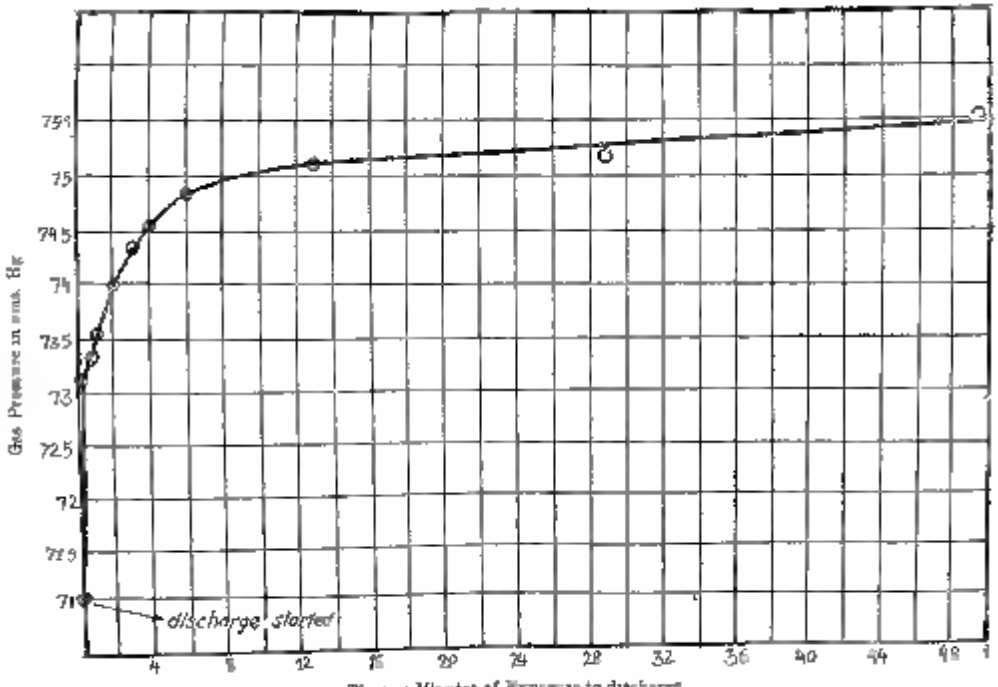
Results in Tables 1-3 show the values of dp_1 under different conditions of the gas pressure and of the applied P.D. These results have been obtained from the curves shown in figs. 1-7, in the following manner:—

The position where the prolongation of the second section cut the vertical axis was observed from the rising pressure, and from the falling pressure, curves, that is, when the discharge was switched on and off respectively, the rate of electrode cooling being kept constant. The mean of these two positions was taken as the corona pressure for the particular gas pressure and the applied P. D. This extrapolation of the pressure rise for the initial time, is to some extent justified by the fact that the second section commences close to the pressure axis. In experiments referred to in Table 2, the rate of the water flow was kept at its maximum, so that dp_2 was practically negligible compared with dp_1, particularly in Expt. Nos. 4-8. The curves corresponding to the results in Table 2 are not given here because of their essential similarity to those shown in figs. 1-7 (i.e., in Tables 1, 3).

It will be seen from these results that at a constant applied P. D. dp_1 increases as the gas pressure increases. For example from the results in Table 2 dp_1 is 2.4 and 2.1 cms. Hg. corresponding to a pressure of 70.1 and 51.7 cms. res-

Fig. 2

Oscillogr. A



Time in Minutes of Exposure to discharge

P. D. applied = 12400 Volts (r m s)

Mean rate of Electrode cooling = 200 c.c. water per minute

pectively. It was observed later, qualitatively, that the increase of dp_1 with pressure was much slower at much larger values for the gas pressure.

The results in Table 2 also show that dp_1 increases as the applied P. D. increases, the pressure being constant. It is interesting to note that the current varies in a like manner.

TABLE I.—OXYGEN A.

Applied Potential=12,400 Volts (r. m. s.)

Expt. No.	Reference fig.	Gas pressure in cms. Hg.	Current in milliamps (r.m.s.)	Rate of Electrode cooling in c.c. H_2O per minute		Corona pressure rise in cms. from curves with discharge	
				at H.T.	at L.T.	On	Off
						dp_1	dp_1
1	fig. 1	70.1	2.5–4.0	325	900	2.11	2.2
2	fig. 2	"	"	100	100	2.01	"
3	fig. 3	"	"	18	58	2.1	2.2
4	fig. 4	51.7	1.0	400	1000	1.65	1.65

TABLE II.—OXYGEN A.

Variation of the Corona pressure with the applied Potential, V

Gas pressure=70.1 cms. Gas pressure=51.7 cms.

Expt. No.	V in Volts (r.m.s.)	Current in milliamps (r.m.s.)	Corona pressure rise in cms. Hg.	Current in milliamps (r.m.s.)	Corona pressure rise in cms. Hg.
			dp_1		dp_1
1	15,400		2.4	6.0	2.1
2	12,400		2.11	1.0	1.61
3	11,300		1.7	4.0	1.4
4	10,500		1.3	3.0	1.15
5	9,600		1.0		0.9
6	8,400		0.5	1.5	0.7
7	7,200			Too small to read	0.4
8	6,400	"		"	0.2

TABLE III.—OZONISER B

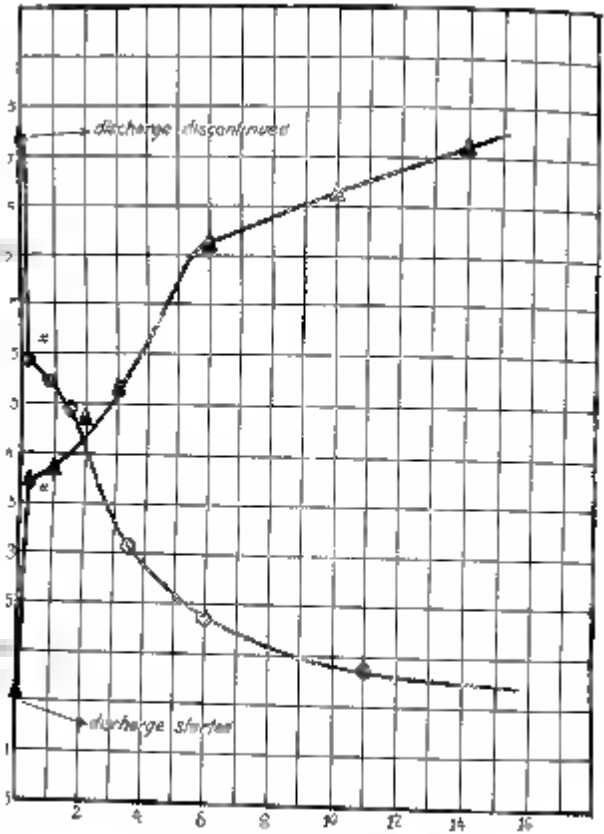
Applied Potential=12400 Volts (r.m.s.)

Expt. No.	Gas pressure in cms Hg	Rate of Electrode cooling in c.c. H_2O per minute.		Corona pressure rise in cms from curves with discharge	
		at H.T	at L.T	on	off
				dp_1	dp
1	44·1, fig. 4	61	58	1·10	1·41
2	41·6, fig. 1	180	110	1·41	1·11
3	" "	411	1110	1·1	1·11
4	46·7, fig. 7	22	27	1·45	1·41
5	" "	101	121	1·40	1·41
6	" "	411	1110	1·10	1·11
7	19·3, fig not shown	"	"	1·91	2·0

Some observations were next made in an attempt to compare the actual temperature rise in the gas exposed to the discharge with that deduced from the corona pressure. A thermometer reading to 0.1°C was enclosed in a tube, which was sealed to the ozoniser terminal. This tube was evacuated on the Töpler through a tap sealed to it. The following typical result was observed in the experiment to which Expt. No. 7 in Table 3 refers. The heat effect was reduced to a minimum by increasing the rate of electrode cooling. The corona pressure rise of about 2.0 cms with the gas at 59·3 cms pressure at 14°C corresponds to a temperature rise of about 10°C. The temperature rise observed on allowing the gas exposed to the discharge to flow quickly in the thermometer tube was only 0.5°C. It is not certain

Fig. 8

Operator A



Time in minutes with discharge, on a 4 cell

Potential applied = 12400 volts (r.m.s.)

however to what extent the gas had cooled before the temperature was registered

Part II

Experimental Arrangement

The experiments now to be described were made with different ozonisers in order to measure the actual temperature of the gas during exposure to the discharge, by introducing a thermometer in the ionisation space. It is evident that if a non-thermal pressure rise is produced by the discharge, the observed pressure of the gas under the discharge would be greater than that deduced from this temperature.

For these experiments a special thermometer graduated to read within 0·2°C and with a width of 4 millimeters was used. This was calibrated before and after each series of experiments Other experimental arrangements were similar to those in Part I with the exception that the high tension electrode was not cooled, and that instead of mercury a dilute solution of sulphuric acid was used as the outer electrode in order to read the thermometer inside the annular space.

It was obviously necessary to have the width of the annular space at least 2 3 millimeters greater than that of the thermometer The mean strength of the field across the annular space for a given applied potential was therefore much less in these ozonisers than in the case of those used in Part I of these experiments, where the entire width of the annular space was 3-4 millimeters). This was partly responsible for the fact that the corona pressures observed with these ozonisers were much smaller than those obtained previously, under very much different conditions of gas pressure etc Moreover, it was not possible to increase appreciably the coronal pressure at a given gas pressure by increasing the applied P D as the inner electrode nearly always fractured at voltages greater than 11000, (except in the case of the ozoniser referred to later, made of pyrex glass). This may be attributed to the fact that the voltage gradient across the annular space in

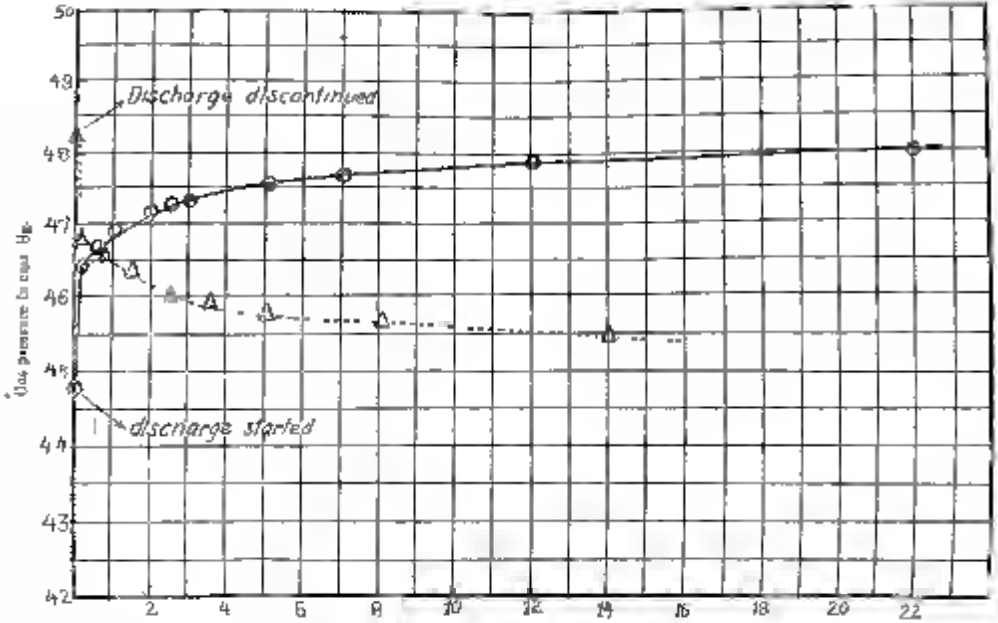
a vessel of this type, given by $V/\gamma \log_e R/r$, is greatest at the surface of the inner electrode, and that this gradient increases by increasing R/r the ratio of the radius of the outer to that of the inner electrode, for a given value of P. D applied to the ozoniser The value of R/r for the ozoniser used in the experiments now to be described was considerably greater than that for A and B used in the previous observations (Tables 1-3). It is probable therefore that a P. D. applicable in the ozonisers A. B might produce too large a surface gradient in the case of the new ozonisers, so as to rupture the glass envelope of the inner electrode

The Results

The expts. Nos. 1-5, Table 4, were made with an ozoniser made of soft glass. The radius, and the wall-thickness of the inner electrode were 4.0 millimeters and 1.0 millimeter respectively. The inner electrode, however, gave way as the applied P. D exceeded beyond 12400 Volts (r. m. s.) The results of Expts. Nos. 2-5 show a small pressure rise of 1-3 millimeters, which is in excess over that calculated from the temperature of the gas subjected to the discharge. The accuracy of the pressure measurement was not less than one millimeter; that of the temperature measurement was not less than 0.1°C. The result of an observational error of 0.5°C e.g., in Expt. No. 4, will affect the calculated final pressure by 0 6 millimeter This is considerably smaller than dp as observed, viz., 3.0 millimeters. It may also be mentioned that in Expt. No. 3, the final temperature, viz., 23 4°C remained constant for half an hour, during which period the rate of electrode cooling was varied between 50 to 720 c.c. of water flow per minute.

Fig. 4

Discharge 11.



Time (minutes) with discharge, on and off.
Potential applied = 19400 volts (r. sq. m.)

TABLE 4

Frequency 137 cycles per second

Expt. No.	Gas used	Voltage applied in Volts (± 0.1) V	Initial gas pressure in cms. Hg	Initial temperature t_0	Final temperature t_f	Final pressure in cms. Hg observed under discharge	Pressure calculated for t_0 in cms. Hg.	dp_1 in cms.
1	Nitrogen	(?) 8,000	42·2	16·5	20·6	42·7	42·8	−·1 (?)
2	"	9,000	41·8	15·8	21·3	42·9	42·7	0·2
3	"	10,400	41·9	15·6	23·4	43·2	43·03	0·1
4	"	10,500	41·8	16·0	25·6	43·5	43·2	0·3
5	"	12,400	"	"	28·0	43·85	43·74	0·3
6	Hydrogen	12,400	28·4	18·2	23·0	30·0	29·5	0·1
7	"	13,000	29·2	18·1	23·7	30·3	29·9	0·5
8	"	14,000	29·2	18·1	24·9	31·15	29·9	1·25

The expts. Nos. 6-8 were made with hydrogen in an ozoneser in which the inner electrode was made of pyrex glass, which was ground to fit with the outer electrode. An additional mercury thermometer (freshly calibrated) reading to 0.1°C, was suspended from the inner electrode. The values for dp_1 confirm the results in Expts. Nos. 1-5. The result in experiment No. 8 shows a marked value for dp_1. It was found however that during this experiment the electrode was slightly perforated at the applied potential, as judged from a very fine spray of mercury on the inner surface of the outer electrode and a tiny patch of a greenish glow on the inner electrode. It must be pointed out that the final pressure and temperature remained steady, when the discharge at this potential was continued for about 10 minutes. It may be doubted, however, whether a uniform temperature prevailed in the system, with a local brush

about 15 cms. distant from the bulbs of the thermometers. It is of interest to point out that the watts consumed in the ozoniser increased by 4 units after this brushing was produced in the ozoniser. As the time taken for the final temperature and the pressure to become steady was appreciable, it was not possible to read the final pressure at 14000 volts before the perforation of the inner electrode.

Discussion of Results

The investigations on the nature of the corona pressure carried out by the various workers so far, refer to discharges produced in a vessel of the wire-in cylinder type. The values of dp_1, the corona pressure, as observed usually in these experiments is of the order of a few cms. of water. In the present investigation, the use of a Siemens' ozonisers has enabled observations with much greater values for the corona pressure (*cf.* results in Tables 1-3). This may be ascribed partly to a much greater dissipation of the electrical energy in a Siemens' ozoniser than in the vessel of the type mentioned above, for a given value of the applied potential and of the mass of the gas.

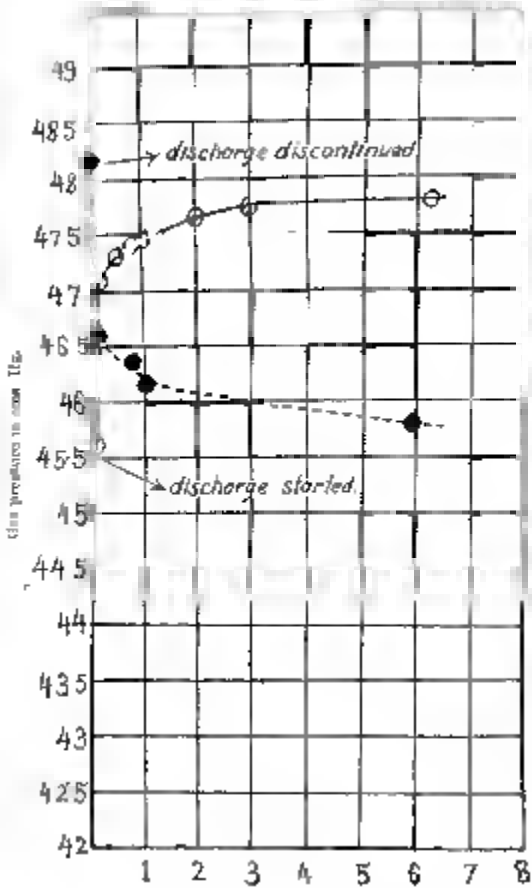
Moreover, no information exists in the literature on the subject regarding the influence on dp_1 of altering the rate of heat conduction away from the system (figs. 1-7).

It is to be anticipated that if dp_1 is entirely a simple heat effect like dp_2 it would be affected to an appreciable extent by the factor mentioned above. This is further confirmed by the observation that unlike dp_2 the pressure rise due to heat, dp_2, is comparatively slow to develop during the initial stage (*cf.* p. 1 and figs. 2-3).

It is however almost improbable that Kunz' first theory of the phenomenon can be appreciably true. It is that dp_1 refers to an increase in the number of particles in the discharge space as a result of the ionisation of the gas. Now it would appear to be well recognised among physicists that the percentage ionisation of a gas in an ordinary discharge is such that the corresponding pressure rise is practically negli-

Fig. 5

Chamber B



Time in minutes with discharge on and off
Potential applied = 15400 volts (r. m. s.)

gible†. It is now proposed to show that the intensity of ionisation in any of the experiments in Tables 1-3 is such that the corresponding value for dp_0 is insensible. The following assumptions are made:—(i) value of U: the electronic velocity is of the order of 10^7 cms. per second. The limits of the validity of this assumption in relation to the final results will be considered later. (ii) The current per unit area can be expressed to a first approximation by $i = N e U$, where i is the electronic charge in e.m. units (1.19×10^{-20}) and n is the number of ion pairs per c.c. of the gas space.

As an example the Expt. No. 1, in Table 2 made with a $2 N_2, O_2$ mixture at 11.7 cms. and at 15,400 volts (r. m. s.), may be considered. The corresponding values for the current and for the corona pressure were 6.0 milliamps and 2.1 cms. Hg. respectively. The mean electrode area was 209 sq. cms. The current i per unit area is therefore $\frac{6 \times 10^{-3}}{209} = 3.0 \times 10^{-5}$ Amp. i.e., 3.0×10^{-4} in e.m. units. The intensity of ionisation, n, as given by (ii) is $\frac{i}{eU}$. Thus is

$$\frac{3 \times 10^{-4}}{(1.19 \times 10^{-20}) \times 10^{7}} = 1.8 \times 10^{7}.$$

The number of molecules per c.c. of the discharge space in the same experiments is known from a knowledge of the volume of the annular space (33.1 c.c.) and of the gas temperature 11°C, viz., 1.3×10^{18}. It will be seen therefore that the fraction of the gas ionised is of the order of 10^{-11}, and that the corresponding pressure-rise is exceedingly small. It may also be pointed out that this conclusion is unaffected if the value of U is greater than that assumed in (i), in this calculation, since it will diminish n and therefore also the fraction ionised. It can be shown on general grounds that U cannot be more than, say, 100 times less than its value adopted here. Even in this extreme case the fraction

†Foote and Mohler (Origin of Spectra, New York, 1922, p. 157) consider that the maximum order of magnitude for the partial pressures of the electron gas under ordinary discharges is 10^{-8} atmosphere.

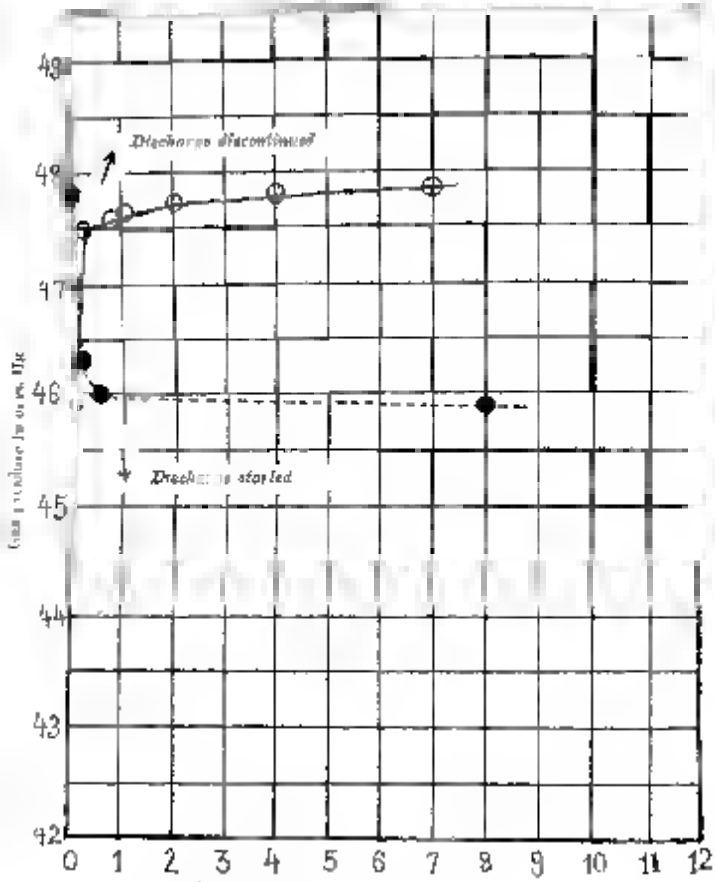
ionised is about 10^{-10}. The conclusion drawn above regarding the possible effect of the amount of ionisation on the pressure is however unaffected.

Recently Kunz[7] has developed an alternative theory for the origin of the corona pressure phenomenon. On the assumption that this is due to a transfer of the ionic momentum (gained by motion under the applied field) to the gas molecules, the expression for the corona pressure in a wire-in-cylinder discharge tube has been deduced to be $i'/4\pi v$ approximately, where i' is current per unit length of the inner wire and v is the average ionic mobility. This theory has received some support from the recent experiments of Fazel[8] on the corona pressure phenomenon. It has been also observed by Kunz[9] that the value of v deduced from the above expression for a given gas agrees approximately with that calculated from independent data. It is well known that ionisation by collision with electrons does not set in unless the electronic velocity is well above 10^8 cms per second. The mean velocity of thermal agitation in the $_2N$, O_2 mixture at ordinary temperatures is of the order of 10^5 cms per second. The possibility of a transfer of the ionic momentum to the gas molecules is assumed by Kunz is therefore not unlikely.

It is not certain however as to what extent the above process will affect the temperature of the gas. It is evident that if the corona pressure is entirely non-thermal, the actual pressure exerted by a gas subjected to the discharge should exceed that given by the gas temperature T_2 (Table 4). The experiments described in Part II were carried out with this object. For a decisive information on this point large values of the corona pressure are obviously advantageous. Unfortunately for reasons explained already, this was not possible without endangering the life of the discharge tube of which quite a number were tried. The results presented in the last column of Table 4 however show that even when a correction is made for the pressure rise due to the increase of the gas temperature as shown by two sensitive

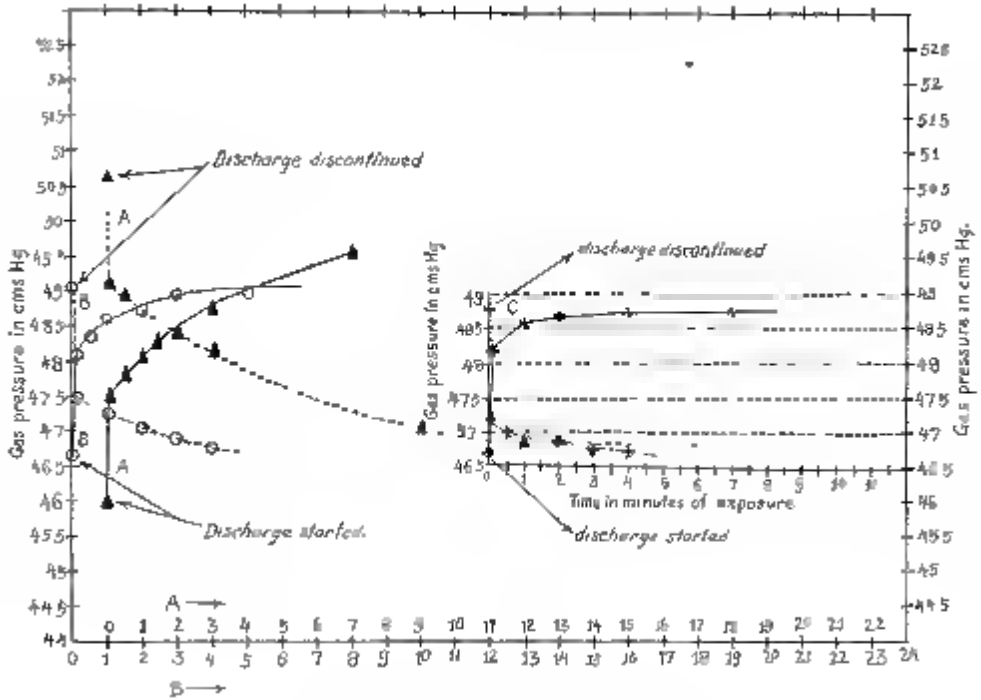
Fig. 9

Oxygen B



Chamber B

A, B, C, (parts of curves) with different rates of electrode cooling



Time in minutes with discharge, on and off

Applied potential = 12400 volts (r. m. s.).

thermometers immersed in the gas subjected to the discharge, a small residual pressure rise is noticed.

It may be stated therefore that the balance of the evidence collected in this paper suggests that probably the corona pressure is not entirely due to the heat effect of the discharge in the gas. In view of the great interest of this phenomenon it would be desirable to carry out observations similar to those referred to in Table 4, in a discharge tube capable of producing larger corona pressures. From the results in Expt. No. 1 in Table 4 referred to already where an appreciable value of dp_1 was observed, as the insulating envelope of the inner electrode was perforated under the discharge, it may be suggested that an arrangement with metallic electrodes would be more serviceable. A thermometer made from a thin capillary and reading over a limited temperature range would also be an advantage.

S. S. Joshi

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6 Tyndall and Searle, *Phil. Mag.*, 1918, 35, 251
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8 Anderegg, *Trans. Amer. Electrochem. Soc.*, 1923, 44, 203
9 Kunz, *Phys. Rev.* 1922, 19, 165.

RADIATION OF LIGHT UNDER EXCITATION WITH POSITIVE-RAYS

When positive-rays traverse a space filled with gas molecules, the rays as well as the gas molecules may be excited to emission of light. The excitation and the subsequent radiation in the former case for Balmer lines of hydrogen have been the subject matter of previous communication[1] For most of the details and experimental technique those very papers have to be referred to. The latter will form the subject-matter of the present paper.

For Balmer lines of hydrogen ($H\alpha$, $H\beta$, $H\gamma$ etc.) the light emitted in the two cases are distinguished by the presence of Doppler-displacement of these lines in the spectrum in the former case, and by the absence of the same in the latter case. An inclination of about 15° to 20° to the direction of the positive ray is a suitable angle to observe the displacement, particularly in view of its fine structure. Further, that the band spectra (also called the many-lined spectra) of hydrogen is given out only by the molecules bombarded by the positive rays, and that the molecules in the positive ray itself do not contribute to any appreciable extent to the band spectra has been shown by Rau[2] by his ingenious method of studying minute Doppler-shifts by refraction of the light through a glass rod The continuous spectra is to be attributed to the molecules that have been bombarded with the positive-ray particles. Measurements on the intensity of the molecular spectra both band and continuous spectra would also be reported here.

Experimental Results

In tables below, J' is a measure of the intensity of a line and is equal to the area enclosed between the intensity

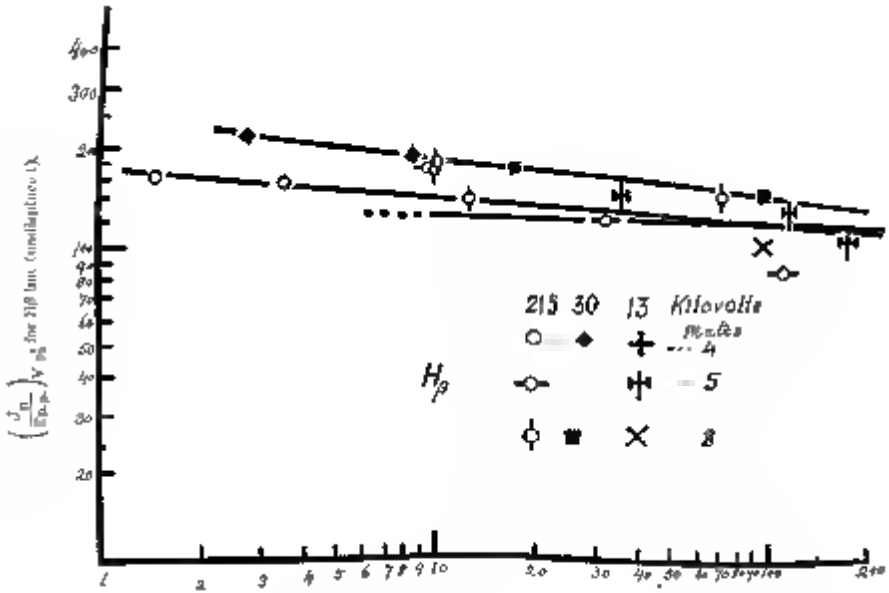
[1] B. Dasannacharya, Ann d. Phys 77, 537, 1925, Ann. d. Phys. 1, 74, 1929.

[2] H. Rau, ann d Phys., 73, 266, 1924.

TABLE 1

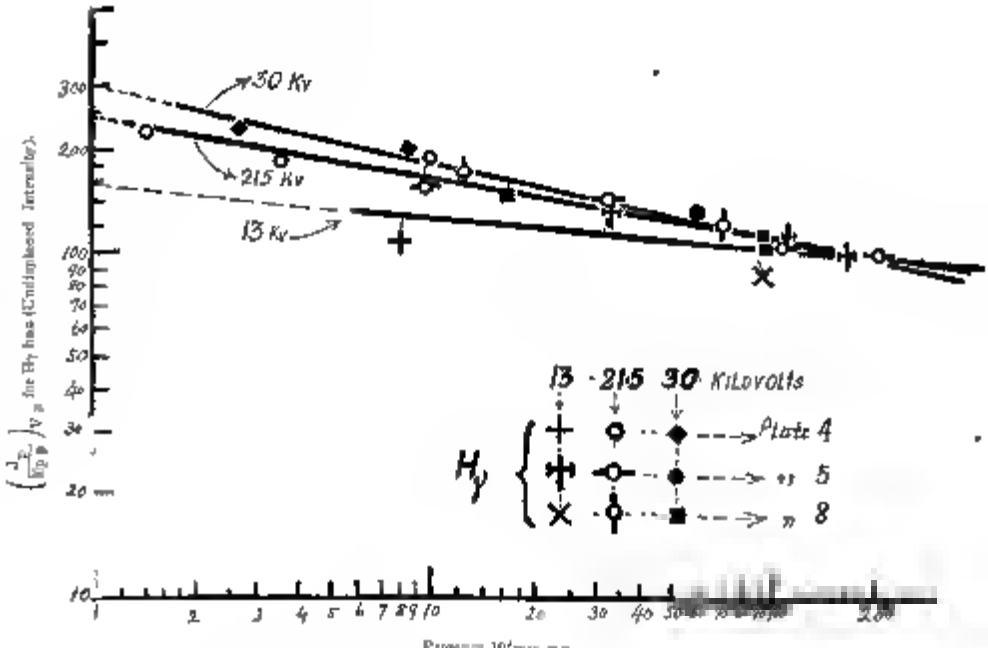
Serial No. of Plate	Potential Difference Volts × 10⁻³	Pressure PX 10⁻³ mm	Energy Deflection cm = E	Integrated Intensity	π_β $\frac{I}{E}$	$\frac{I}{K}$	$\frac{I}{K_\beta}$	Integrated Intensity	π_γ $\frac{I'}{K}$	$\frac{I}{\gamma}$	$\frac{I}{K_\gamma}$
	30	1.2 3.9	191 194	1.7 9.9	1.87 9.63	1.30 1.61	1.18 1.06	4.6 15.5	1.39 0.95	0.1 1.4	0.31 2.01
9	11.5	1.46 4.41 9.9	139 130 111	4.3 4.76 5.7	0.66 1.37 4.19	0.43 1.65 1.51	1.91 1.58 1.84	1.15 3.11 11.20	1.18 0.57 1.00	0.11 1.1 1.40	1.15 3.9 1.11
	13.0	88 3.0	42.5 91.3	—6 1.336	1.31			8 0.0	0.78	0.9[r]	1.19
5	50	90 93 190	134.9 134.0 119.1	1				13.7 1	1.00	9.67	1.70
	11.3	9.5 31.0 100.0 191.0 210.1	111.9 120.1 111.0 89.1 83.6	3.83 9.30 19.4 1	0.32 1.71 1.67	1.70 3.19 2.93	1.19 1.71 2.1	1.31 7.7 4.0 6.6 1	0.19 0.60 1.46 1.86	3.46 9.50 10.10 14.4	1.39 1.91 1.03 0.8
	13	34 111< 163	31.3 19.1 11.2	2.55 5.25 7.30	0.95 1.31 2.15	3.05 19.71 19.00	1.16 1.50 1.1	1.11 3.1 9.00	0.19 1.64 1.1	4.97 11.3 16.1	1.51 1.11 1.9
6	30	16.1 9.00 30.6	127.5 130.5 115.1	3.55 1.1	4.35 10.1	1.1	1.30 1.97	3.3 39.7 17.0	3.15 1.42 16.1	1.31 0.15 10.95	1.99 1.05 11.5
	11.5	3.7 12.5 43.6	93.3 78.3 70.6	1.50 1.3 10.5	1.6 1.6 14.3	1.7 1.3 1.1	1.91 1.15 1.41	3.45 13.8	5.5 19.6	1.11 3.20	1.90 1.11
	13	15.6 32.0	17.5 13.7	1.8 5.61	19.4	9.75	1.06	5 4.73	20	8.0	1.7

[1]Intensity peak too small for accurate measurement.
[2]Peak too high and goes out of the scale.



Pressure 10^{-6} mm. = p.

Fig. 1



Pressure 10^{-6} mm = p.

Fig. 9

distribution curve and the level of the general continuous spectra-intensity on either side of the line It may be called "Integrated Intensity" It may be mentioned here that the intensity curve was obtained by converting the blackness curve according to the method of Wien. For the continuous spectra J' is simply the intensity level over and above the general level of fogging. For the band spectral line J' has the same significance as for a Balmer line.

E is the energy of the positive-ray beam as measured in a specially constructed high sensitivity thermojunction. J'/E for a particular line, though under identical conditions of the ray, time of exposure and pressure p in the chamber in which the molecules of hydrogen get hit by the positive ray particles, would be different from plate to plate depending on the development of the photographic plate. So to make results strictly comparable one standard positive-ray spectra was photographed common to all the plates and J'/E for this normal was given the arbitrary value 7. The values under other conditions referred to this value is indicated as J/E. Thus J/E *is independent of the plate*. The normal was a positive ray line (really a Doppler displaced strip) one at H_β and another at H_γ produced at a voltage of 21500 and a pressure of 10 11^{-3} mm. Hg

The small correction to p for the presence of small quantities of vapour exuded from Picein joints as applied to measurements of the intensity of the displaced hydrogen lines as reported in previous communications is not applicable in the present series of measurements. This is so because now we are concerned only with the partial pressure of hydrogen in the observation chamber (one might also call collision chamber) This partial pressure is correctly read off through the MacLeod gauge.

Figs 1 and 2 show the values of $\frac{J_\gamma}{E_p}$ as ordinate against p as abscissa on double logarithmic paper The points lie on a straight line for any one value of V This straight line

makes an angle with the log p axis, the tangent of which is —k, a negative quantity

The relation may, therefore, be expressed as follows, V being regarded as constant.

$$\frac{J_\nu}{E_\nu\, p} = \left(\frac{J_\nu}{E_\nu\, p}\right)_{p=1} e^{-k \log p} \qquad (1)$$

The values of $\frac{J_\nu}{E_\nu\, p}$ calculated for different values of p are tabulated in table 2 The measured values of k are also given in the same table in column three

From column 9 it is clear that k varies directly as the voltage in the discharge tube *This is a very significant and important result*, obtained from direct measurement.

The values of $\frac{J_\nu}{E_\nu\, p}$ at different voltages used in the present series of experiments differ but little from a mean value. This is because the lines cut each other between about 5.10 $^{-3}$ and 0 15 mm. Hg. So one is apt to conclude that the variation with voltage is negligible. That such a conclusion would not be valid is obvious from figures 1 and 2 considering the whole range of measurement from 0,0015 and 0.2 mm. Hg.

Further at t=0.1 i.e., 10^{-4} mm. Hg.) the value of $\frac{J_\nu}{E_\nu\, p}$ —V is constant, see column 10, table 2, compare also columns 11, 12 and 13. Denoting this constant as $A_{\nu,1}$, we may write (1) as follows:—

$$\left(\frac{J_\nu}{E_\nu\, p}\right)_{\nu,p} = A_{\nu,1} V e^{-kV \log p} \qquad (2)$$

The value of $A_{\nu,1}$ would depend on the arbitrary unit chosen for expressing the intensity J_ν and also on the wave-length, but would be independent of V and p. In the particular arbitrary unit used in the present series of experiments the value is for H_β 1.16 10^{-2}, and for H_γ— 1 67 10^{-2}. The value of B (Table 2 col 9) is 3 8 10^{-7} for H_β and 7 8 10^{-8} for H_γ.

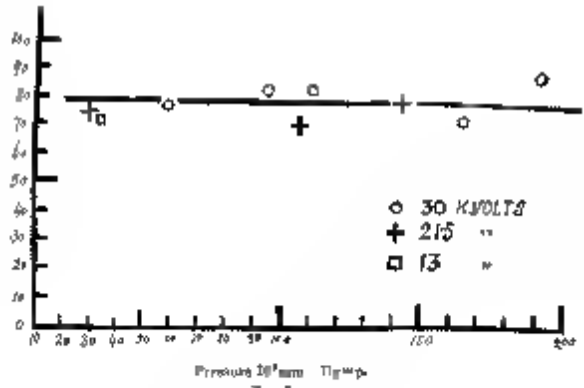
TABLE 2

Spectral line	Discharge voltage $\times 10^{-3}$	Value of k	$\frac{1}{k_p}$ 1st pressure corresponding to $p \times 10^{-3}$ mm Hg					$\frac{k}{7}$	$\frac{I}{I_p}$ in V			
			$p=0.1$	1.0	11	100	200		$p=0.01$	1.0	10	100
Hg	30	0.121	138.0	211	192	144.6	132.1	0.0041	11.1	8.1	6.4	4.4
	21.1	0.088	201.9	179.1	143.9	120.1	112.3	0.0010	9.1	1.2	6.7	5.2
	13.0	0.0417	161.0	141.0	110.1	117.1	111.1	0.0011	12.4	11.1	10.0	8.7
Hγ	30	0.2264	112.1	305.0	101.1	101	92.4	.00711	17.01	10.17	8.01	1.6
	21.1	0.1761	372.1	243.0	101.2	110	97.4	.00121	17.12	11.13	7.61	1.02
	13.0	0.1011	204.6	162.0	120.3	101.1	94.6	.00700	11.7	12.1	9.86	7.8

TABLE 1

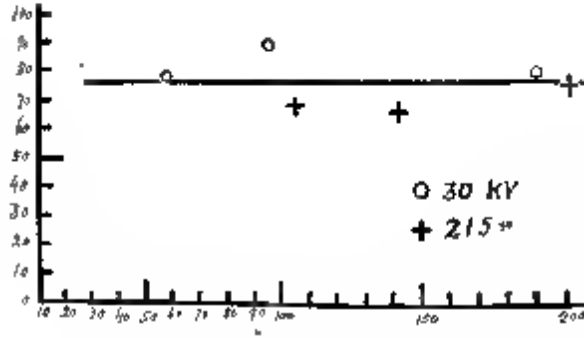
Potential Difference in Volts 10^{-3}	Pressure in mm. 10^{-6} = p.	Energy E in cm.	p=4147.9 cm. Hγ Integrated Intensity J'	J'/E	J/E	J/Ep	Continuous Spectra near Hγ Intensity J'	J/E	J/Ep
10	19	134.0	1.11	0.080	0.417	77.5	0.1	4.46	71.1
	91	134.0	2.10	117	0.34	10.1	1.03	7.70	11.0
	150	114.2	1.2	210	1.50	79.0	1.98	11.10	07.1
71.1	9.1	171.0	§				0.1	0.13	17.1
	12.0	121.0	§				0.1	2.14	71.0
	106.0	110.0	1.01	1.132	0.707	00.7	0.1	7.78	61.7
	142.0	85.2	1.11	174	0.93	01.1	0.97	10.3	70.3
	101.0	81.6	2.11	217	1.11	71.0	1.40	16.8	33.3
11	14	37.1	§				0.13	7.4	70.1
	111	19.0					0.17	8.31	01.1
	101	71.1					0.21	11.1	71.0

§Too faint to be measured with accuracy.



Pressure 10⁻³ mm Hg × p.

Fig. 5



Pressure p, 10⁻³ mm.

Fig. 4

Continuous and many lined spectra

The measurement for a line 4847.9A° near H_γ and for the continuous spectra also near H_γ are given in table 3, and illustrated in figures 3 and 4. Since the number of points for any one voltage is not large no attempt has been made to trace dependence of intensity on voltage. There is no doubt that to a first aproximation at least, $\frac{J}{E.p}$ is constant and independant of voltage and pressure.

B. Dasannacharya

SOME CHEMICAL PROPERTIES OF DI-ISOBUTYLENE

Introduction

This work started with a view to study various chemical properties of di-isobutylene and to discover, if possible some industrial application of its compounds. Tertiary butyl alcohol was very easily available and, as would be expected, two molecules of it can be condensed into di-isobutylene by means of sulfuric acid.[1] After having thus prepared, the starting material of the research, *i.e.*, di-isobutylene, a study of its addition products with hypochlorous acid and chlorine monoxide was made. Also, attempts were made to prepare tetra-isobutylene and other higher polymers of isobutylene by treating di-isobutylene with sulfuric acid of various strengths.

Contrary to expectation, no chlorhydrin of di-isobutylene was obtained when the latter was treated with hypochlorous acid. On the other hand, an unsaturated chloride of the empirical formula $C_8H_{15}Cl$ and a mixture of most probably some higher chlorine compounds was obtained. The mechanism of formation of the unsaturated chloride, is apparently this:—

$$\underset{\text{di-isobutylene}}{(CH_3)_3C\text{-}CH{=}C(CH_3)_2} + HOCl \rightarrow (CH_3)_3C\text{-}\overset{|}{\underset{Cl}{CH}}\text{-}\overset{|}{\underset{OH}{C}}(CH_3)_2 \rightarrow$$

$$\underset{(a)}{(CH_3)_3C{=}C(CH_3)_2} \text{ or } \underset{(b)}{(CH_3)_3C{=}CH{-}O{-}CH_3}$$

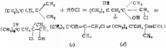
The chlor-hydrin (II) formed according to the follow

[1] J. C. S. A., 121 126, (1878)
A. Butlerow, B, 3, 1637 (1876), cf. J. C. S. A. 236, 1882, J. C. S., L, 24, (1880) Ber, 21, 1239-1240; Butlerow J. Russ. C. S., 39, 1907

ing mechanism cannot split off water to form unsaturated chloride

$$(CH_3)_3 \cdot C\ CH{=}C(CH_3)_2 + HOCl = (CH_3)_3\ C\ \underset{OH}{CH}-\underset{Cl}{C}(CH_3)_2$$

The other isomer of di-isobutylene may form an unsaturated chloride by the following mechanism:—



The two isomers of di-isobutylene are capable of adding hypochlorous acid in the four ways as designated. Out of these only two addition products (I) and (III) can split off water, each in two ways and give four unsaturated chlorides. These unsaturated chlorides are designated by (*a*), (*b*), (*c*) and (*d*). As would appear from the four formulas of the chlorhydrins designated by the Roman numerals, those that are capable of splitting water are the ones most likely formed and hence the amount of chlorhydrine designated by formulas II and IV must be very small and may be in the higher boiling fraction. From what has been said above, it is clear that the unsaturated chloride obtained was a mixture of one or all of the four isomeric chlorides and that the high boiling mixture contained perhaps very minute traces of the two chlor-hydrins II and IV and some secondary products from the reaction of the unsaturated chlorides and hypochlorous acid. The mixture of four unsaturated chlorides gave up a very small fraction of chlorine on 48 hours refluxing with moist silver oxide or sodium hydroxide. Alcoholic sodium hydroxide required 48 hours to deprive the chlorides of most of their chlorine.

The mixture of unsaturated chlorides was further treated with hypochlorous acid. The reaction went on

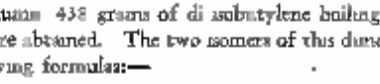
smoothly but the final products could not be distilled even at a pressure of 3 mm. without decomposition. Also the chlorine atoms from the compound could not be removed quantitatively by any of the usual methods.

Chlorine monoxide reacts very vigorously with various hydrocarbons, and gives complicated products. In case of di-isobutylene also, chlorine monoxide gave a mixture of various products, which were found very difficult to be separated.

When di-isobutylene was treated with concentrated sulfuric acid in varied proportions, a mixture of high boiling compounds was obtained. No compound could be isolated. About a third of the solution which went in solution in sulfuric acid was turned dark and gave on steam distillation and further extraction with benzene a very viscous tarry material. Even when the steam distillate was distilled again with caustic soda, no better results were visible. It is evident from these results that sulfuric acid charred a part of the hydrocarbon which went into solution and polymerized the other portion of it giving a mixture of unknown hydrocarbons.

(1) Experimental Preparation of Di-isobutylene

1000 cc. (781 grams) of tertiary butyl alcohol and two liters of 1:1 by volume sulfuric acid were first cooled separately, and then mixed slowly with constant stirring until the alcohol was dissolved. The whole mixture was refluxed on a water bath for one hour, the upper layer was separated by a separatory funnel, washed thoroughly with water, and dried over anhydrous potassium carbonate. The oily layer was fractionated at atmospheric pressure using a fractionating column. 438 grams of di isobutylene boiling at 101-105°C were obtained. The two isomers of this dimer have the following formulas:—



(2) Effect of Hypochlorous acid on di-isobutylene

1 mol (112 gms.) of di-isobutylene and 700 cc. of 10.6 per cent solution hypochlorite solution (1 mol) were placed in a two liter flask which was immersed in ice water and 60 gms. of glacial acetic acid were added to the solution, 5 cc. at a time at intervals of five minutes, the solution being stirred vigorously all the time, by means of a mercury seal stirrer. When all the acetic acid had been added, which took about an hour, the stirring was continued for about an hour more, until the solution showed no change in its content of chlorine. From the analysis of the solution for available chlorine, the per cent of hypochlorite used up was found to be 86.5 per cent. The stirring was stopped, upper layer separated and thoroughly washed with water, dried over anhydrous copper sulfate, and distilled at a pressure of 15.6 mm.

The volume of the dimer at the start was 133 cc. and the volume of the crude product after drying was found to be 151 cc. which weighed 135.4 gms. Boiling started at room temperature at a pressure of 15.6 mm. and this volatile compound could not be collected even when the two receivers were immersed in a freezing mixture of ice and hydrochloric acid. Two fractions were collected one boiling from 48°C to 54°C and the other from 54°C to 68°C. The volume of the one, boiling between 48°C to 54°C was 78 cc. while the volume of the higher boiling fraction and that remaining in the flask was 68 cc. Thus the total loss in fractionation was 5 cc. The low boiling fraction was repeatedly distilled until a constant boiling compound was obtained. This boiled at 34-35°C at a pressure of 5 mm. This boiled at atmospheric pressure at 154-155°C with slight decomposition.

(3) Some Physical and Chemical Tests on the Chlorine compound

The chlorine compound taken for these tests was refractionated by using a Widmer column.

A—Halogen analysis of the compound by Carius method

The percentage of chlorine was found to be 23.54 per cent. This shows that the chlorine compound is not a chlor hydrin because the theoretical percentage of chlorine in chlor-hydrin should be 21.54 per cent.

B—Molecular weight determination of the compound

The molecular weight of the compound was found to be 149, 152.5. The average value is therefore 150.

C—Other Physical Properties of the compound

Refractive index at 25°C=1.4455 (Abbé refractometer).

Specific gravity $D^{20°}$=0.9019

Freezing point by using a mixture of solid carbon dioxide and ether was found to be -65°C to -70°C.

D—Halogen Determination by other Methods

The chlorine compound when refluxed for 12 hours with alcoholic sodium hydroxide gave an analysis of chlorine equivalent to 16.8 per cent. The same compound when refluxed for 28 hours showed chlorine content 22.2 per cent.

E—Other Chemical tests on the Chlor-compound

1. By refluxing the compound with dry sodium hydroxide for 12 hours no effect was visible. The compound had the same boiling point. But on refluxing the same with alcoholic sodium hydroxide, a heterogenous mixture was obtained, which boiled from 65-165°C.

2. 16.4 grams of the compound was refluxed with a 200 cc. solution of 34 gms. of silver nitrate and 8 gms. of sodium hydroxide. After refluxing for 28 hours, the upper layer was separated, dried as usual and distilled. The boiling point was found to be 156-158°C, showing that practically there had been no change.

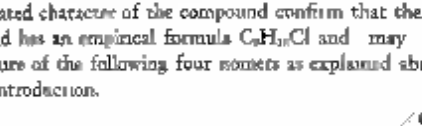
3. The compound was soluble in concentrated sulfuric

acid with a crimson red color and on diluting it with water, an apparently polymerized product separated at the top

4 The compound decolorized very quickly a carbon tetrachloride solution of bromine

From the above chemical and physical tests, it becomes quite evident that the compound is not a chlor hydrin and that the chlorine in it is very firmly bound Also the compound is unsaturated is evident by tests (3) and (4).

The chlorine analysis and molecular weight determinations check very closely with the formula $C_8H_{15}Cl$. Also the firmness of the chlorine attached to it as well as the unsaturated character of the compound confirm that the compound has an empirical formula $C_8H_{15}Cl$ and may be a mixture of the following four isomers as explained above in the introduction.



To definitely prove the structure of the compound, further work needs be done

(4) Study of the High Boiling fraction in the reaction of dimer with Hypochlorous acid:

(a) It was suspected that some chlorhydrins may be present in this high boiling mixture and also that some oxides may also be present. The high boiling fraction was refluxed for 12 hours with dry sodium hydroxide slightly moistened with water, but practically no change was noticed in the boiling point and other properties of the fraction. Several attempts were made to separate some compound from the mixture by fractional distillation under reduced pressure but there was no success. There was some decomposition during the distillation of the mixture.

(b) The chlorine determination by Carius method was found to be 25.21 per cent. The percent of chlorine in

chlor-hydrin should be 21.54 per cent whereas in the chloride it is 24.21 per cent.

From the above it is clear that the whole fraction is a mixture of some monohalogen derivatives or chlorhydrins of di-isobutylene or some non-halogen derivatives of the dimer mixed with higher chlorine compounds. The fractionation and the halogen determination give no clue as to its possible nature. But it is possible that some of the chlorhydrins may have been formed which are very unstable and give off hydrochloric acid on distillation at very reduced pressures. Side by side some polyhalogen derivatives are also formed raising the boiling point of a very small amount of the oxide obtained from chlorhydrin and thus make the separation of the compound almost impossible

(5) Polymerization of di-isobutylene by sulfuric acid

Sulfuric acid is known to polymerize unsaturated hydrocarbons. Tetramer of isobutylene contains 16 carbon atoms and it was thought that it might be interesting to study its formation and behaviour toward hypochlorous acid and other substances.

(a) 50 cc of di-isobutylene was slowly added to 200 cc concentrated sulfuric acid contained in a glass stoppered graduate with constant shaking. There was some evolution of heat and the acid turned deep red in color. The two layers were separated, the upper layer was thoroughly washed, dried and distilled. This experiment was repeated by changing the volume relation between dimer and concentrated sulfuric acid to 1:5 and more, and also by using sulfuric acid of somewhat weaker strength. Evidently there was polymerization, and with the increase of proportion of conc. sulfuric acid to dimer, more of the latter went into solution, but no constant boiling compound could be isolated. Also the last portions of the distillate were very viscous and yellowish in color. The residue was often charred to a black mass.

(5) Since a large amount of dimer went into solution, it was thought interesting to see what happened to it and hence the following study was made

The sulfuric acid layer was diluted with a large amount of water and allowed to stand over night Two layers were distinctly visible, the upper layer was very scanty but smelled very tarry and was black The lower layer was red. Without separation, the whole solution was distilled until almost all the upper layer had come over in the receiver The upper layer this time was yellowish and oily and the lower layer was evidently water The upper layer was extracted with a small amount of benzene and distilled Before all the benzene had time to distill over, the whole mass turned very dark and smelled something like burnt organic matter From this experiment it became evident that the tarry matter probably contained some sulfonic acids or some very unstable compound. Hence the procedure was modified and the lower layer was several times steam distilled in an alkaline solution The yellowish oily layer was extracted with benzene, dried, and benzene evaporated off on a steam bath The residue was a very sticky thick reddish black mass. The residue from benzene separation gave a test for sulfur by simple fusion with sodium in a hot copper tube, and then tested with sodium nitro prusside solution. For want of time no more work was done with this.

(6) Effect of Chlorine monoxide on dimer

Chlorine gas was passed through four flat and U shaped glass tubes in which a thin layer of red oxide of mercury was strewn. These tubes were immersed in cold water to prevent their over-heating due to the action of the chlorine gas on the oxide. The issuing gas was passed through a U-tube containing about 10 cc. of dimer. This last tube was immersed in a freezing mixture of ice and hydrochloric acid The outlet of this tube was immersed in a beaker containing some cold water The water of the beaker gave

no test for chlorine for several hours, indicating that no free chlorine had passed through the tube. The product obtained from the action of dimer and chlorine monoxide after a run of 24 hours was removed and studied.

(7) Chemical and Physical Properties

(*a*) An aqueous solution of silver nitrate gave no turbidity in cold. When the solution was boiled, a turbidity was obtained.

(*b*) The compound when treated with an aqueous solution of potassium iodide, gave no reaction. When a few cubic centimeters of hydrochloric acid were added to the solution of potassium iodide in water and the compound, no reaction was noticeable.

(*c*) The compound gave Beilstein test for chlorine.

(*d*) Specific Gravity of Dimer=0.777 at $D_{20^\circ}^{20^\circ}$

Specific Gravity of the new compound=0.824 at $D_{25^\circ}^{25^\circ}$

(*e*) Refractive index of the dimer=1.430

Refractive index of the Comp'd=1.437

No further study of the compound was made due to lack of time.

Summary

1. The dimer of isobutylene adds hypochlorous acid readily; but splits off water and forms an unsaturated chloride of the empirical formula $C_8H_{15}Cl$.

2. Concentrated Sulfuric acid polymerizes the dimer forming sulfonic acids and high boiling unsaturated hydrocarbons.

MAHADEVA LALL SHROFF

ON THE STATISTICAL ASPECT OF ADSORPTION

The fact that gases as well as solutes from a solution are taken up by bodies offering a large surface such as charcoal, freshly prepared precipitates like silica and alumina and colloidal particles as in arsenious sulphide sol, is known since a pretty long time. In the beginning the two allied phenomena of absorption and adsorption were not differentiated. Gibbs[1] was the first to point out that adsorption, as distinguished from absorption, is essentially a surface phenomenon. According to him only those substances are adsorbed, which lower the surface tension of the adsorbing medium. This is expressed by the following equation,

$$\Gamma = -\frac{c}{RT}\frac{d\sigma}{dc} \qquad \ldots \qquad (1)$$

Where Γ is the amount adsorbed, c the concentration, σ the surface tension, R and T denote the gas constant and the temperature. This subject has been studied both theoretically and experimentally by several authors. The importance of adsorption in colloid chemistry was first indicated by Freundlich[2]. This phenomenon plays an important role in several industrial operations, involving catalysed reactions, e.g. in the manufacture of sulphuric acid, synthesis of ammonia, hydrogenation of oils and in sugar refining. During recent years, the adsorption phenomenon has been studied with reference to some biochemical problems and this may throw some light on the mechanism of several physiological operations.

Now the Gibbs-Thomson equation is difficult to apply quantitatively to experimental result, so a more convenient empirical form was proposed by Freundlich[3]

$$a = sc^{\frac{1}{n}} \qquad \ldots \qquad (2)$$

Where a is the amount adsorbed, s and n are constants and c is the concentration. Recently Bancroft[4] has

shown that this can be derived from Gibbs original postulate. It was left to Langmuir[1] to study the kinetics of adsorption. He considers a checker—board arrangement of the surface of the adsorbent which is partly covered and partly free. The adsorbate is held by the free surface by the residual valencies of the surface orientated atoms or molecules. Thus, according to him, adsorption is a chemical phenomenon and the adsorbed layer is only one molecule thick. The following is the fundamental equation of Langmuir

$$x = \frac{N_0}{V}\,\frac{kp}{1+kp} = \frac{k''p}{1+k'p} \qquad (3)$$

where x is the amount adsorbed, $\frac{N_0}{V}$ is a constant, k is the rate of evaporation or condensation, k'' is another constant and p the pressure of the gas. If each of the adsorbed molecule occupies only one adsorption centre on the surface of the crystal, the above formula may be reduced to the following familiar form due to Reichenstein[7]

$$x = \frac{Kc}{1+Kc} \qquad (4)$$

where c is the concentration, x is the amount adsorbed per unit surface, a a constant, that corresponds to van der Waals surface correction and is equal to double the molecular area and K is the Langmuir constant. Several other authors e.g. Eucken[8], Polanyi[9], Volmer[10], Taylor[11], and Patrick[12], have proposed different formulae from time to time, but amongst these Langmuir's formula appears to be the most satisfactory.

It may be pointed out that equation (1) was derived by Gibbs, on thermodynamical ground, which is however defective, since it throws no light on the actual mechanism of the process. Langmuir, on the other hand, used kinetic methods. Besides these two, there is a still more instructive method, viz., that of statistical mechanism which takes into account the behaviour of individual molecules. The applications of this method to physico chemical phenomena are however too well known to be enumerated here[13]. This

method was first applied to adsorption by Frenkel[10] who obtained an expression for the same, using Maxwell's equation. The same method was applied by Hückel[11] and also by Seitz[14] who obtained Langmuir's expression in terms of the vibration frequency of the molecule in the crystal lattice. Very recently, S. C. Cao[15] used Planck's cell statistics and with the help of the thermodynamic functions deduced equation (4) and obtained the following value for for K

$$K = \frac{(2\pi m kT)^{\frac{3}{2}}}{h} \, e^{\frac{\varepsilon}{kT}} \qquad \ldots \quad (5)$$

where m is the mass of the adsorbate, h Planck's constant of action, k is the Boltzmann constant and ε the adsorption potential.

A survey of the various statistical methods, shows, that besides the classical forms of Maxwell and Boltzmann and the phase integral method of Gibbs, we have several other methods developed, during recent years, amongst which a few may be mentioned, e.g., the probability method of Ehrenfest and Tikal[16], the method due to Stern[17] the partition method of Fowler[18]. Again the introduction of h in classical methods led to the new Bose-Einstein[19] statistics for light quanta and Fermi Dirac[20] statistics for electrons. Attempts have been made by several authors[21] to reconcile the old classical statistics with the new one. Now, since Gibbs method is much simpler than the other methods, we shall apply the generalised Gibbs statistics of Kan Mazumdar

$$\rho = \frac{N}{\psi} \, e^{\frac{\psi_0 + \psi - u}{kT}} \qquad \ldots \quad (6)$$

where ψ_0 is the free energy of the cells, Ψ that of the whole system, u the energy of the system, and ψ (=Nh³) the total phase volume.

During recent years the present writer has been engaged in studying adsorption and several other physical problems from the point of view of adsorption by applying statistical methods. In the following, the underlying principle of the

methods employed will be mentioned and the importance of adsorption in connection with some well known physico chemical phenomena will be discussed.

*Chemical Adsorption**. The general method developed in the following may be briefly stated thus In every case we consider an equilibrium between two phases one of which is gaseous or free and the other adsorbed or bound and the number of molecules in each phase is calculated by Gibbs' method from the total number of molecules and the free energy of the system. Thus the molecules in the free state is given in every case by the following.

$$n_1 = \frac{N}{\phi} \int \int_{\Pi} \frac{\psi_0 + \psi - \mu}{kT} \Delta T_p \Delta T_q \quad \ldots \quad (7)$$

where ΔT_p ΔT_q is the total phase volume being the product of the differentials of positional co ordinates and the corresponding momenta Since for material particles, we have to adopt the generalised Gibb's method in the form form, we have

$$n_1 = \frac{N}{\phi} \int \int \frac{1}{e^{\frac{\psi - \mu}{kT}}} \Delta T_p \Delta T_q$$

$$= \frac{N}{\phi} (2\pi) (2mk)^{\frac{1}{2}} \tau I \quad \ldots \quad (8)$$

where I stands for the integral

$$I = \int \frac{x^{\frac{1}{2}}}{e^{\frac{\psi - \mu}{kT}} + 1} dx \quad \ldots \quad (9)$$

In the case of adsorption of gases at ordinary temperature, equation (8) reduces to the classical form

$$n_1 = \frac{N}{\phi} \frac{(2\pi m kT)^{\frac{3}{2}}}{h} e^{\frac{\psi}{kT}} \quad \ldots \quad \ldots \quad (10)$$

For the gas present in the adsorbed state on the surface of a solid, one of the degrees of freedom in the direction per-

pendicular to the surface, is lost, i.e., we may regard $dz.\ dpx.$ as a constant σ, having the dimension of action. $\sigma = nh$. Thus we have the number of molecules in the adsorbed state

$$n_s = \frac{N}{\phi^3}\sigma \int \cdots \int \frac{1}{e^{\frac{\Psi - u + \alpha}{kT}} + 1} dx\, dy\, dp_x\, dp_y$$

$$= \frac{N}{\phi}\sigma (a-b)\,(2\pi m k T)^{\frac{1}{2}}\, e^{\frac{\Psi}{kT}}\, e^{\frac{\alpha}{kT}} \qquad \ldots \quad (11)$$

here the available area is $a-b$ b being the vander Waal correction, which is large compared to the corresponding volume correction, and hence it is to be taken into account although the latter may be negligible. α is the adsorption potential By combining equations (10) and (11) we have

$$\alpha = \frac{Kq}{1-qn} \qquad \ldots \qquad \ldots \quad (4)$$

where $n = \frac{1}{V}$, $q = \frac{1}{c}$ and

$$K = \frac{(2\pi m\ kT)^{\frac{1}{2}}}{\rho}\, e^{-\frac{\Psi}{kT}} \qquad \ldots \quad (12)$$

which reduces to equation (5) if $\sigma = nh$ for unimolecular adsorption layer. The adsorption potential may be identified on the one hand with the heat of adsorption, and, on the other, with Polanyi's maximum adsorption potential (which is the value for unimolecular adsorption layer) In some cases, this potential is found to correspond to the heat of sublimation and the values of K as calculated from equation (12) using gram-molecular quantities, agree with those computed from experiments of well known authors for the adsorption of several gases e.g., CO_2, CO, N_2, CH_4 and CaH_4 by charcoal. Since adsorption potential in some cases, correspond to the heat of sublimation, it is postulated[5] that the adsorbed gas is present as a solid layer on the surface of the adsorbent, resembling somewhat solid solutions, but much more com-

plex in nature. Incidentally it may be pointed out that introducing, the familiar Gibbs equation becomes slightly modified since the amount adsorbed is no longer proportional $\frac{1}{n}$, but to $\frac{1}{n-g}$. Thus

$$\Gamma = \frac{1}{\frac{1}{n}-g} = -\frac{c}{RT}\frac{dc}{dc} \qquad (16)$$

This however does not go against the values of Γ experimentally determined. It has also been shown, that the formula of Seel[54] as well as those of Frankel and Hückel[57] referred to before, can be reduced to the form (4) leading to the value of K as given by (12) when they are transformed with the assumption $h\nu = KT$, where ν as before represents the average vibration frequency and is the reciprocal of the period, and KT is the energy of the molecule in the gaseous state. This assumption is valid for ordinary temperature, since it leads to the value of ν of the order of 10^{13} in agreement with experimental value. It may be further pointed out that Freundlich's equation (2) can also be statistically deduced 25 (*a*) on the assumption that a molecule is held by N adsorption centres on the surface of the crystal lattice.

Electrical Adsorption[58]. Besides adsorption of neutral molecules, there is another phenomenon very common in colloid chemistry, known as ionic or polar adsorption. When an electrolyte is brought in contact with a precipitate or a suspensoid, then one kind of the one is adsorbed in preference to that of the other: a phenomenon experimentally demonstrated by Michaelis and Rona. This is responsible for the charge of the colloid particles, which become discharged and coagulated by the adsorption of opposite ion. Amongst the various theories put forward to explain this polar adsorption that due to Mukerjee appears to be most satisfactory. He assumes an electrostatic force between the charged particles, and calculates the adsorption of a particular ion from the probability of collisions. Thus he points out the effect of

valency, mobility and complexity of the ion and explains the mechanism of charge reversal by the adsorption of a polyvalent oppositely charged ion. He extends his ideas to hydrolytic adsorption which explains the liberation of acid by precipitates in contract with neutral salts. Recently Stern, from considerations of Gouy's diffuse double layer, has deduced the following formula

$$\eta = F\,c\,e\left(e^{\frac{z\psi}{kT}} - e^{-\frac{z\psi}{kT}}\right) \qquad (18)$$

where η is the amount adsorbed, ψ the potential of the double layer, F the charge associated with a gram ion, z the valency and c the concentration.

Instead of assuming with Mukerjee the adsorption of ions in two different stages (chemical and electrical) we assume that both the positive and negative ions are simultaneously adsorbed, partly chemically and partly electrically. Thus beside the chemical adsorption potential, the electrostatic work performed by the ions due the potential of the double layer, must be taken into consideration. Thus we obtain by applying methods indicated in the previous section

$$\eta_1 = \frac{c}{K_1}\eta_1 e^{\frac{+n_1 eF}{RT}} \quad \text{and} \quad \eta_2 = \frac{c}{K_2}\eta_2 e^{-\frac{n_2 eF}{RT}} \qquad (14)$$

where n_1 and n_2 are the valences, K_1 and K_2 the Langmuir constant which includes mass and mobility (c), F is the potential of the double layer (In this case c is identified with the initial concentration and θ is neglected). From equations (14) we finally have

$$Z = \eta_1 - \eta_2 = \frac{\eta_1 e}{K}\left(e^{\frac{n_1 eF}{RT}} - e^{-\frac{n_2 eF}{RT}}\right) \qquad (18)$$

where K is the Langmuir constant for any ion. The above equation which is similar to equation (15) can explain in a semi-quantitative manner, the order of adsorbability, the origin and reversal of charge of colloids exactly in a similar manner as Mukerjee's theory. It may be further pointed out that equation (15) resembles an equation derived by

Rude from the consideration of Donnan's theory of membrane equilibria.

Electronic Adsorption[11]. According to the modern electronic theory of matter, the ionisation of a material particle is due to the capture or removal of electrons. Emission of electrons may take place either by passing silent electric discharge (cathode rays), or by light (photoelectric phenomena), collision with α particles, (disintegration of atoms) or by heat (thermal and stellar ionisation). Saha regards ionisation of Stellar elements as a chemical reaction, and has investigated this thermodynamically by using Nernst's reaction isochore, and considering electron as a monatomic gas. Thus substituting the Sackur Tetrode value for the chemical constant of the electron, in the Nernst equation, he obtains the famous equation, known after him

$$\log \frac{x^2}{1-x^2} P = -\frac{U}{RT} + \frac{5}{2} \log T - 5.5 \qquad (16)$$

where x is the degree of ionisation, P the total pressure, and U the heat of ionisation. Equations similar to (16) were subsequently obtained by Fowler, Becker and Saha and Sur.

In the present case, we shall consider an equilibrium between the free and the adsorbed (or bound) electrons. We shall however distinguish this from chemical adsorption, in assuming that in the case of electron of electronic adsorption all the degrees of freedom are lost. Thus the number of free electrons is given as before by equation (8) and that in the bound state

$$n_1 = \frac{N}{\phi} \cdot \frac{e^{\phi}}{e^{-\frac{\phi+\mu}{RT}} + 1} \qquad (17)$$

where $\phi = nh\nu$ and ϵ is the adsorption potential identified in this case with the ionisation potential or the heat of dissociation. For non degenerate case we have as before from (10) and (17)

$$n_1 = \frac{N}{\phi} V (2\pi mkT)^{\frac{3}{2}} e^{\psi/kT} \qquad (18)$$

$$n_2 = \frac{N}{\phi} Bh^3 e^{\frac{\psi+\varepsilon}{kT}} \qquad (19) \text{ where } B = n^2$$

Now the ionisation is represented by the following scheme

$$A = A^+ + E^-$$

n_1 corresponds to the number of ions $[A^+]$ and n_2 to the neutral molecule $[A]$. If a gram mole of electron is present, n_1 represents the concentration of electron $[E^-]$. Thus we have

$$K_c = \frac{[A^+][E^-]}{[A]} = \frac{(2\pi MRT)^{\frac{3}{2}}}{BN^2h^3} e^{-\frac{Q}{RT}} \qquad (20)$$

$$k_p = RT\, k_c$$

which is identical with the Fowler Milne equation. If we take into consideration the equilibrium constant with respect to pressure $K_p = RTK_c$, then taking logarithm and substituting values of M, N, and R we obtain the Saha equation with a constant B(T), which corresponds to the statistical weight factor.

For degenerate case I in equation (6) is to be integrated according to Sommerfield's method

Thus

$$n_1 = \frac{N}{\phi} V (2\pi)(2m)^{\frac{3}{2}} \frac{4}{3\sqrt{\pi}} \Psi^{\frac{3}{2}} \qquad (21)$$

$$\text{and } K_c = \frac{8\sqrt{\pi}(2m)^{\frac{3}{2}}\Psi^{\frac{3}{2}}}{3Bh^3}\left(e^{-\frac{\psi+\varepsilon}{kT}}+1\right) \qquad (22)$$

$$\text{If } e^{-\frac{\psi+\varepsilon}{kT}} << 1, \text{ we have } K_c = \frac{8\sqrt{\pi}(2m)^{\frac{3}{2}}\psi^{\frac{3}{2}}}{3Bh^3} \qquad (23)$$

Thus we see that ionisation is independent of temperature and agrees with the assumptions of Fowler, Stoner and others in the theory of Dwarf Stars[21].

Now Stellar ionisation is only a special case of Richardson's thermionic phenomena. According to Richardson, the current generated on the application of an external field to a system from which electrons are emitted is connected

with temperature by either of the following expressions

$$i = A\,T^{\frac{1}{2}}\,e^{-h\nu/T} \qquad \ldots \qquad \ldots \quad (24A)$$

$$i = C\,T^{2}\,e^{-h\nu/T} \qquad \ldots \qquad \ldots \quad (24B)$$

of which the latter is theoretically more sound. Dushman, and later on, Roy derived equation (24B) by thermodynamical and statistical methods respectively in the following form

$$i = \frac{2\pi\,m\,k^{2}}{c\,h^{3}}\,e\,T^{2}\,e^{-\frac{e}{kT}}$$

The statistical weight factor occurs in Roy's formula only. The same has been deduced by Fowler and Nordheim, both by statistical and wave Mechanical methods. Very recently Sommerfeld has obtained Richardson's $T^{\frac{1}{2}}$ formula for non-degenerate and T^{2} formula for the degenerate case by applying Fermi statistics.

Now since here we are considering a heterogeneous equilibrium the equilibrium constant Kc is determined by the number of electrons finally present per unit volume. Thus for non degenerate case we have from (20)

$$n = \frac{(2\pi\,m\,k\,T)^{3/2}}{B\,h^{3}}\,e^{-\frac{\pi}{kT}} \qquad . \qquad (26)$$

From classical theory it follows that the number of electrons crossing unit surface per sec.

$$n_1 = n\left(\frac{k\,T}{2\pi\,m}\right)^{\frac{1}{2}}$$

Hence

$$i = n_1\,e = \frac{2\pi\,m\,k^{2}}{B\,h^{3}}\,e\,T^{2}\,e^{-\frac{e}{kT}} \qquad . \quad . \qquad (28)$$

For degenerate case, we have n as given by (22). Now in order to find the number of electrons crossing unit surface per sec., we are to modify the classical method in the light of the Fermi statistics. Thus we have

$$n_2 = n\,\frac{\int f\,\phi\,dx\,dy\,dz}{\int f\,dx\,dy\,dz}$$

where the distribution function

$$f = \frac{1}{e^{\frac{\psi - \mu}{kT}} - 1}$$

Following Sommerfeld's method of integration we have

$$(7)\begin{cases} i = \frac{2\pi m k^2}{B h^3} \cdot e \cdot T^2 \cdot e^{-\frac{\psi}{kT}} & \text{for } e^{\frac{\psi - \mu_0}{kT}} << 1 \\ & \text{(Non-Degenerate)} \\ i = \frac{2\pi m k^2}{B h^3} \cdot e \cdot \frac{\pi^2}{6} & \text{for } e^{\frac{\psi - \mu_0}{kT}} = 1 \\ i = \frac{\pi^2 m}{B h^3} \cdot (\psi - \mu_0)^2 & \text{for } e^{\frac{\psi - \mu_0}{kT}} >> 1 \text{ (Degenerate)} \end{cases}$$

Here μ_0 is the inner austrittsarbeit of Sommerfeld. Thus we have the T^2 formula for the non-degenerate case, which is in agreement with the results of Dushman and Roy. Again, the last equation is identical with that of Houston for electron emission from cold metals, a phenomenon first investigated by Schottky and later on developed by Millikan and co-workers.

One point may be mentioned in this connection. In the case of chemical adsorption we introduced Van der Waal's correction in the adsorbed state. If we introduce a similar correction in the phase space due to the adsorbed molecules already present a factor $(1 - n\,\gamma)$ where γ is the correction for a single electron, is introduced in equation (17), and we obtain a modification of Saha and Richardson equation. Thus instead of equations (20) and (23) we have

$$K_1 = \frac{(2\pi m k T)^{3/2}}{B h^3} e^{-\frac{\psi}{kT}} + \frac{(2\pi m k T)^2}{B^2 h^6} e^{-\frac{2\psi}{kT}} \gamma$$

(Non-Degenerate) (22)

$$K_2 = \frac{8\sqrt{\pi}}{9 B h^3} (2m)^{3/2} \psi^{3/2} + \frac{8\pi}{9} \pi (2m)^2 \psi^2 \gamma \text{ (Degenerate)} \quad (23)$$

leading to corresponding equations for the thermionic current. The correction factor is however too small to effect

the results, and hence the modified equations are not of much practical importance.

Magnetonic Adsorption[20]. From the modern electron theory of matter, it is a well established fact that the magnetic properties of elements are to be ascribed to the electrons. Thus diamagnetism is due to the change of orbital motion of the electrons in a magnetic field accounted by Langevin from "Larmor's precession" and paramagnetism is due to the orientation of "unbalanced" electrons in the magnetic field. It has been rightly pointed out by Van Vleck that the paramagnetic susceptibility is really the sum of the above two factors just as Dielectric polarisation is the sum of the Polarisation factor due to distortion and to orientation. Recently Pauli, developed a theory of paramagnetism from the electron theory of matter and obtained expressions for the paramagnetic susceptibility for degenerate and non-degenerate cases by applying Fermi-statistics according to him, the paramagnetic susceptibility is independent of temperature for degenerate case. This result has been extended by Bloch.

In the case of thermionic emission, we have seen that the electrons are, so to say, pulled from within the metal by thermal energy. Here we shall postulate that the magnetic properties are mainly due to those electrons which are brought to the surface of the atom from the various orbits with m quantum number when the magnetic field is introduced. Thus the adsorption potential is to be associated with the magnetic energy E_m, which however may have all possible values depending upon the vale m from $-j$ to $+j$. Hence we have for non-degenerate case

$$n = \frac{(2\pi m kT)^{\frac{3}{2}}}{Bh^3} e^{-\frac{E_m}{kT}} = \frac{(2\pi m kT)^{\frac{3}{2}}}{Bh} \left(1 - \frac{E_m}{kT} \right). \quad (10)$$

The number of electrons initially present ($E_m = 0$)

$$N = \frac{(2\pi m kT)^{\frac{3}{2}}}{Bh^3} \quad (E_m = 1)$$

Thus the increase of electrons due to the application of the field is given by the second term on the right hand side of

(30). Since $x_m = \Sigma_m \Xi_m$ if the intensity of the field is unity we have from (30) and (31)

$$x_p = \frac{N\Sigma \Xi_m^2}{3kT} = N\,j\,\frac{\mu^2}{kT} = \frac{Ng^2 j\,(j+1)\,\mu_0^2}{3kT} \qquad (32)$$

Since $\Sigma E_m^2 = G\,j\,\mu^2\,H^2$

$\mu = g\mu_0\sqrt{j\,(j+1)}$ = μ_0 being the Bohr magneton, j the inner quantum number and 'g' the Lande splitting factor Hence the total paramagnetic susceptibility

$$\chi_p = N\alpha + \frac{Ng^2\,j\,(j+1)\mu_0^2}{3kT} \qquad \ldots(33)$$

For degenerate case we proceed in a similar manner from equation and finally obtain a similar expression as (33), thereby indicating that Curie's Law holds good for low temperature as well, which is bourne out by experimental facts. This is also found by Howells. Again our expression (33) also agrees with Van Vleck's expression.

Quantic Adsorption[9]. In the case of equilibrium between radiation and matter we have to apply the generalised Gibbs statistics in the Bose Einstein form. Since free energy for quanta $\varphi = 0$ and the momentum of a quantum is $\frac{h\nu}{c}$ we have the number of kuanta having frequencies between ν and $\nu+d\nu$ in equilibrium between the free and the adsorbed state as follows by a method similar to that used in equation (26).

$$n = \frac{8\pi\nu^2 d\nu}{c^3\left(e^{h\nu/kT}-1\right)} \qquad \left(e^{-\frac{\alpha}{kT}}-1\right) \qquad (34)$$

Taking the average energy of quantum and identifying α with—$h\nu$ the energy density of quanta having frequencies between ν and $\nu+d\nu$

$$\rho d\nu = n\bar{E} = \frac{8\pi h\nu^3}{c^3}\,\frac{1}{e^{h\nu/kT}-1}\,d\nu \qquad . \qquad (35)$$

Now introducing a correction factor due to the effect of the already adsorbed quanta (as in previous section) on

the phase space, we have

$$\mathcal{N}\delta\nu = \frac{8\pi h^{-3}\delta\nu}{e^{h\nu/kT}-1} + \frac{(8\pi\nu)^{2}h^{-3}\nu^{3}\,\delta\nu}{c\,(e^{h\nu/kT}-1)^{2}} \qquad (36)$$

which is similar to that obtained by Strum and others. Since however the correction term contains $(\delta\nu)^2$ it may be neglected for all practical purposes.

Unimolecular Reaction[1]. Considered from the point of view of adsorption according to the radiation hypothesis of Trautz, Perrin and Lewis, reactions are brought about by the absorption of infra red radiation, and the temperature effect is entirely due to this. Theoretical values for the velocity coefficient as deduced on the hypothesis is at variance with the experimental values. Several other theoretical and empirical formula have been proposed from time to time by different authors, amongst whom Herzfeld, Dushman, Christiansen, S. C. Roy, and Polanyi and Wigner may be mentioned.

We shall first of all regard the molecules as activated by absorption of infra red frequency and subsequently undergo decomposition according to the following scheme

$$[AB]_n \longrightarrow [AB]_a \longrightarrow [A]+[B]$$

Now since the absorbed frequency is very large, the number of activated molecules

$$[N_{AB}]_a = [N_{AB}]_n\, e^{-\frac{h\nu_0}{kT}} \qquad (37)$$

In those cases when molecules adsorb all frequencies, we should have

$$[N_{AB}]_a = \int_{\nu_0}^{\infty}[N_{AB}]_n\, e^{-\frac{h\nu}{kT}} = -\frac{kT}{h}[N_{AB}]_n\, e^{-\frac{h\nu_0}{kT}} \ldots \qquad (37a)$$

We shall now treat the problem in two different ways. First of all we may consider unimolecular reactions as similar to thermal ionisation. Hence we may postulate that only those (activated) molecules which leave the crystalline surface, undergo decomposition and the rate of reaction is

identified with the rate of 'emission' of the activated molecule. Substituting the effective mass $m = \frac{m_A m_B}{m_A + m_B}$ for m in equation (25), and introducing effective or available area through which the molecule escapes, we have finally by combining with (37)

$$k_1 = \frac{2\pi m k^2}{h^3} \cdot \frac{S_0}{B} \cdot T \cdot e^{-\frac{N h \nu_0}{RT}} \qquad (38)$$

where $\nu_0 = \bar{T}\nu_{AB}$, ν_{AB} is a virtual frequency being the sum of the infra red frequency ν and where $Nh\nu = Q_0$ the heat of dissociation, the total heat of reaction $Q = Nh\nu_{AB}$. The above expression is similar to that of S. C. Roy. $\frac{S_0}{B}$ may be extrapolated from experimental data. Equation (38) is valid for several unimolecular reactions and the calculated value of k_1, agrees with the experimental value in most cases. Again since ν_{AB} is a virtual frequency it will be futile to look for the absorption band in this region. Only in those cases when Q_0 the critical increment is entirely derived from the radiant energy. The rate of reaction in that case will be directly proportional to the number of active molecules, hence we have for the case when all radiations are absorbed

$$k_1 = \frac{kT}{h} e^{-\frac{h\nu_0}{RT}} = \nu e^{-\frac{h\nu_0}{RT}} \qquad (39)$$

where ν is the vibrational frequency of the reacting molecules such that $KT = h\nu$. Thus ν_0 will correspond to the infra red frequencie as found by McLewis for the inversion of cane sugar from absorption bands.

Instead of regarding the reaction to be analogous to thermal ionisation if we assume that the activated molecules which are present initially in the chemically adsorbed state in the crystal, leave the surface, and the rate of escape will correspond to the reaction velocity. From equations

(4), (12) and (37) we have

$$n = \frac{(2\pi mkT)^{\frac{1}{2}}}{\rho} \cdot e^{-\frac{\epsilon}{kT}} \cdot \nu$$

and the rate of reaction

$$k_1 = \frac{kT}{\rho} \cdot e^{-\frac{h\nu_{AB}}{kT}} \quad . \quad . \quad (40)$$

Putting $\rho = h$ and $\frac{kT}{h} = \nu$, we have

$$k_1 = \nu \cdot e^{-\frac{h\nu_{AB}}{kT}} \quad . \quad . \quad (41)$$

which is similar to the equation of Dushman and Christian and Polanyi. From three dimensional consideration along with Polanyi we have

$$k_0 = \frac{RQ}{N\rho} \cdot e^{-\frac{Q}{RT}} \quad . \quad (42)$$

which becomes identical with Dushman's formula if $\rho = RQ$ and with Polanyi and Wigner's if $\rho = h$

Raman Effect.—According to Prof Raman[12] when radiation of single frequency passes through matter, anomalous scattering takes place and besides the spectral line corresponding to the usual frequency, modified and unmodified lines are obtained The difference between the original frequency ν and the scattered frequency ν' is always equal to the characteristic infra red frequency. We have seen in the previous section that in a unimolecular reaction, the reactant molecules become activated by absorbing infra red frequency and subsequently undergo decomposition. Raman effect may also be considered from this aspect. The normal molecule absorbs infra red frequency and hence the frequency emitted ν' is always the difference of the original frequency and the infra red frequency The reverse is true for already activated or excited molecules, which give up frequency which is the sum of the infra red and the original frequency.

This can be expressed thus

$$[A_\nu]_n \xrightarrow{h\nu} [A]_{a_1} \longrightarrow [A]_{a_2+h\nu'}$$

we consider here an intermediate stage of activation $[A]_{a_1}$ which subsequently "decompose" into $[A]_{a_2}$ $\nu'=\nu$ = infra red frequency. The reverse process is

$$[A]_{a_2} \xrightarrow{h\nu} [A]_a + h\nu \quad \text{Here } \nu'=\nu+ \text{ Infra-red frequency}$$

It follows from the previous section

The velocity of decomposition

$$=\frac{kT}{h} e^{-\frac{h\nu}{kT}} [A]_n$$

The velocity of the opposite reaction

$$=\frac{kT}{h} e^{-\frac{h\nu'}{kT}} [A]_{a_2}$$

Hence

$$\frac{[A]_n}{[A]_{a_2}} = e^{-\frac{h(\nu-\nu')}{kT}} \quad . \quad (43)$$ from which intensity may be obtained

The energy distribution law follows from section of quantic adsorption, the number of free quanta as before is expressed by the following equation and the number of adsorbed quanta

$$n_1 = \frac{N}{\phi} \theta_\nu h^3 \nu^3 d\nu / (e^{h\nu/kT} - 1)$$

$$n_2 = \frac{N}{\phi} \frac{h^3}{e^{-h(\nu+\nu')/kT} - 1}$$

Number of quanta in equilibrium——

$$n = \frac{8\pi\nu^3}{e^h (e^{h\nu/kT} - 1)} \cdot (e^{-h(\nu+\nu')/kT} - 1) \qquad (44)$$

Since the average energy of a quantum is in this case $\frac{h(\nu \mp \nu')}{e^{-h(\nu+\nu')/kT}-1}$ we have the energy density

$$\rho d\nu = \frac{8\pi h\nu^3}{c^3} \frac{(\nu \mp \nu)}{(e^{h\nu/kT}-1)} \qquad (45)$$

Wave Statistics and Adsorption:—In a previous section, we had occasion to refer to the electronic theory of matter. During recent years our ideas of the atom has been revolutionized by the work of L. De Broglie, Schrodinger and others. The material particle is no more regarded as isolated, discrete bodies but as waves. By tracing the analogy with geometrical optics on the one hand and physical optics on the other L. De Broglie[8] postulates that, although for macro-mechanics, matter may be regarded as corpuscles, for micro mechanics we must take into account the wave nature of the atom. The existence of material waves, has been verified by the beautiful work of G. P. Thomson on the scattering of electrons in passing through thin metallic films. The ideas of De broglie were extended by Schrodinger who obtained several interesting results, which the quantum theory had previously failed to explin. According to Schrodinger matter is regarded as an energy packet (group of waves) having a probable maximum density at a particular point, with which matter is identified in classical mechanics. Very recently K. C. Kar and K. K. Mukerjee have extended the generalised Gibbs statistics, already referred to before, by testing anew the validity of Liouville's theory in micro mechanics and taking into consideration the fluctuation of density in phase space. Thus they obtained the following modified form of (6)

$$D = \frac{N}{\phi} e^{\frac{\psi_0 + \psi - \mu}{kT}} \times e^{-i(2\pi\nu - \epsilon)} \qquad (46)$$

where x denotes the change of density with time t and ν is the frequency. From the above equation they derived a wave equation, which yields results identical with those obtained by Schrodinger. Later on K. C. Kar[10] further extended

this idea, and postulated three different kinds of waves χ_1, χ_2, χ_3, the first being the waves due to the fluctuation of density in the q—(positional) space, identified with matter, the second due to fluctuation in the p—(momenta) space, corresponding to radiation whereas the χ_3 waves bring the metamorphosis of χ_1 waves in the q-space is nothing else but light. An entirely new line of work is thus thrown open and this promises interesting results. The phenomena of adsorption can be explained according to the wave statistics in the following manner. Since matter is a wave, it may be reflected and refracted just like light waves. In a homogeneous medium, waves travel in straight line, until it meets the boundary wall, from which it is reflected. If the wave meets a boundary surface of a second phase volume, then both reflection and refraction may take place. In the case of chemical, electrical, electronic and magnetonic adsorption we have the case of refraction of χ_2 waves. The refractive index is $\sqrt{\frac{E}{E-V}}$ where v is the adsorption potential. For large values of v the velocity of χ_2 wave in the adsorbed state is small. It may be mentioned, that if the χ_2 wave falls almost perpendicularly it escapes from the free space of the adsorbed state. The interaction between radiation and matter i.e., between χ_2 and χ_3 waves leads to the Raman and Compton effects. The quantaic adsorption is due to the refraction of χ_2 waves.

A. GANGULI

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A PLEA FOR AN ASTRONOMICAL OBSERVATORY AT BENARES

In India, at the present time we are having a clash of civilizations. The willless East, having implicit faith in a preordained Destiny, has been assailed by a Faustian West, strong believer in Free Will, and striving for the Infinite. The clash should result in the evolution of a new Culture. Pandit Madan Mohan Malaviya, a true representative of the older system believes in the possibility of this evolution and has founded an institution based on European models in the heart of the old system. This institution, however, is lacking a very important element, viz., an organisation for the investigation of the Physical Universe about us, an Astronomical Observatory.

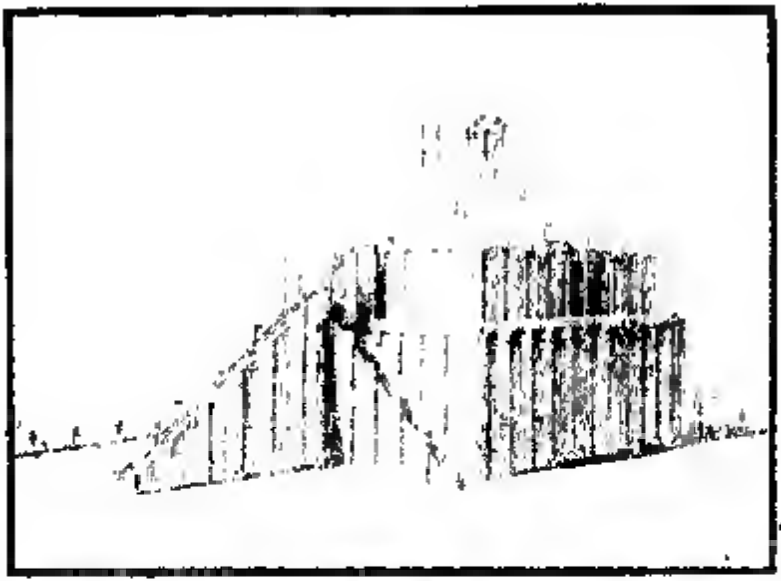
The starry firmament above us with its inland stars and their mysterious motions has always exerted the profoundest charm and influence on the human mind. The science of Astronomy owes its origin to this influence. In the words of the poet Heine it may be described as *die alte, die ewig-junge Wissenschaft*—the old, ever young science.

Let us begin with a little historical retrospect. We know that even in the dawn of civilisation on this globe of ours, astronomy had a peculiar fascination for the thinking section of mankind and

> In Babylon, in Babylon
> They baked their tablets of the clay
> And year by year, wrote thereon
> The dark eclipses of their day
> They saw the moving finger write,
> Its Mene, Mene on their Sun;
> A mightier shadow cloaks their light
> And clay is clay in Babylon.
>
> *A. Noyes—The Torchbearers*

A rudimentary knowledge of astronomy is found amongst primitive people, particularly nomads, shepherds, and sailors but the need for a more systematic knowledge becomes more imperative when the communities settle down to an organised life. The sun and the moon, the two apparently biggest luminaries, are our eternal Time-keepers; the sun determining the period of the day and the moon the period called the month The length of the year was at first derived from the recurrence of seasons, but it was very early found more correct to determine the length of the year from the apparent motion of the sun amongst the fixed stars. Time keeping is a very important function amongst all settled communities, and both in Egypt as well as in Babylonia, the two countries whose past has been explored with some amount of completeness, astronomy in the beginning arose out of the necessity for exact time reckoning. But it acquired great importance on account of its association with religion. In Babylon, in very early times, the heavenly bodies became, in some mysterious way, associated with gods, who were supposed to guide the destinies of every human being. Thus Marduk, the presiding deity of the Babylonian Pantheon, was identified with the Planet Jupiter, Shamash, the god of law and justice with the Sun; Sin with the Moon the female god Ishtar with Venus, and Nabu, the god of Scribes with Saturn.

From this notion arose the pseudo-science of astrology i.e., fortune-telling from the observed motions of planets. In Babylonia, the observation of stars acquired great importance and was carried out in Ziggurats which were temples and observatories combined, dedicated to some great god. Thus astronomy became interwoven into their religious life and was entrusted to the priestly caste. In spite of their wastage of energy in astrological speculations, the Babylonians made great discoveries in pure science and were the teachers of the Greeks, the Persians, the Hindus and the Chinese, though it is quite possible that all these nations had some rudimentary knowledge of astronomical lore before



ZIGGURAT

[Reproduced from Zinner's Geschichte der Sternkunde, page 41]

[Tower of E-te-menak: from the Esagila temple]

The Ziggurat was an astronomical observatory and temple combined. In later times, the ruins of the Ziggurat dedicated to Marduk in Babylon became known as the temple of Babel.

they came into contact with the Babylonians. It was a Babylonian named Berossus who started an astronomical observatory at the island of Cos, and transmitted the Babylonian knowledge of astronomy to the Greeks. The early Greeks, particularly Thales of Miletus, the first amongst the seven wise men of Greece, were probably pupils of the Babylonians. Thales used to astonish his fellow countrymen by foretelling the time of solar and lunar eclipses, the knowledge of which he must have derived from his Babylonian teachers.

In India we can distinguish between several stages of development. The knowledge of astronomy revealed in the Vedas and the oldest Siddhantas (the Paitamaha) is very rudimentary and characteristic of rather primitive societies. The next stage is that of the more advanced Siddhānta, particularly of the Sūrya-siddhanta, which according to Prof. P. C. Sen Gupta, was due to stimulus received from the Babylonians, probably through the Persian Magi. The Persians, an Aryan tribe, gained supreme power in the middle East during the 6th century B.C. and became the successors of the Babylonians as torch bearers of civilisation. Darius, the third of the Great Persian Emperors, included parts of India amongst his dominions, and Babylonian culture must have spread through the Persian missions to India. This is clear from the fact that in India itself, the class professing astronomy is known as Maga or Sakadwipa Brahmins, and are regarded as distinct from orthodox Brahmins.

Both in Greece as well as in India, astronomy developed on different lines. It did not become entirely dissociated from astrology or theology. But in both places there was a distinct culture epoch which afterwards got atrophied in a stereotyped civilisation stage. The greatest of the Greek astronomers was Hipparchus who, besides possessing a comprehensive knowledge of the Babylonian system, made many remarkable discoveries himself. The Greek knowledge in astronomy was worked out into a comprehensive system by Ptolemy, an astronomer who lived in Alexandria about 150 A.D. which was later utilised by the Arabs under the

name Al Mugest and became the standard astronomical treatise up to the time of Copernicus.

The Babylonian conception of the world mainly centred round man as the primary object of interest. Their attention was absorbed in the countries about themselves and the stars were of interest because they were supposed, as remarked already, to rule the destinies of man. The Greeks after the time of Socrates made a heroic effort to free themselve from the dead weight of tradition. They arrived at the knowledge that the earth is a sphere and Eratosthenes even formed an estimate of its radius and Aristarchus of Samos is even credited with the then staggering idea that the earth was not the centre of the universe, but it was a planet moving round the Sun. But the heliocentric view was turned down by the great authority of Hipparchus to be revived fifteen hundred years later by Copernicus.

In India, the first stage in the culture of astronomical knowledge (the Sūrya-siddhanta stage) was succeeded by a second stage which was due to contact with the Greeks, and the Iranian Sakas (or Scythians). But in India, the votaries of the astronomical science apparently found it difficult to go against the scriptures. The Greek savants, with characteristic boldness and freedom of thought, had pooh pooched the Homeric and Hesiodic cosmogony, and made light of the Olympic Gods. But the Indian savants never showed equal boldness. On the other hand, being accustomed to easy-going pantheistic tendencies, he was always ready to compromise and be accommodating in his views. His achievements lay in Arithmetic, Algebra and Trigonometry and their application to astronomy. In these, he made very creditable and lasting contributions, including the famous decimal notation. Many Indian treatises were translated into Arabic, particularly Brahmagupta's *Brahmasiddhanta* (598 A.D.) under the name Sind-Hind. But they were never courageous enough to propose a bolder theory of the universe in opposition to current ideas. Aryabhata of Kusumpur (Pataliputra) (born in 476 A.D.), thought that the earth, by turn-

ing round its axis caused day and night, but his successors did not seem to be impressed with his ideas. It is, however, clear that they were keenly alive to the stupidity of public beliefs or utter inadequacy of the Sastric lore. "It is said", says Bhaskaracharya, "that the earth rests on the hood of a huge snake, which when it feels uneasy gives a shake and causes earthquakes. Well, the snake must have something to rest upon, let it be the tortoise; but this also must have something else to rest upon. So we have to assume the hypothesis of an endless string of the supported and supporters. A better explanation would be that the earth has no support, i.e., is suspended in space". But in the next sentence, he is careful to say 'but since these things are mentioned in the Sastras, there may be some truth in them'.

In the middle ages, the torch of knowledge was kept alive by the Arabs. Their savants were mostly drawn from the Perso-Chaldean and Hellenic group who found it better to put their ideas in the then world-language, viz., Arabic. Great observatories were erected at Baghdad, in Spain, and in Persia and at Samarkand in Central Asia. The Arabic astronomers made valuable observations of planetary motion, collected tables, cast horoscopes, and in mysterious ways, connected Alchemy with Astronomy, and kept alive the traditions of the Chaldean, Greek, and Indian systems, and through their educational centres in Spain and Egypt, became the teachers of the modern Europeans. One of the best known observatories was that founded by Ulugh Begh, grandson of Tamerlane at Samarkand in the year 1461, and the tables of planetary positions he published were for a long time regarded as standard works.

RAJA SAWAI JAI SINGH—THE ASTRONOMER—PRINCE

Bhaskaracarya seems to have been the last great luminary amongst the Indian astronomers. After him, the Indian pundits showed little originality, and were content, with a few exceptions, to cast horoscopes and frame almanacs ac-

cording to rules laid down in the older works. But during the maelstrom of Indian politics in the eighteenth century, there appeared the unique figure of a genuine astronomer in a ruling Indian prince, viz., Sawai Raja Jai Singh of the Rajput state of Jaipur (1686-1743). The following account of Jai Singh's work and achievements in astronomy is taken from Ernst Zinner's *Geschichte der Sternkunde* (History of Astronomy) written in the German language.

"A new era in Indian Astronomy begins with the prince Sawai Jai Singh II who lived from 1686-1743 and furthered the cause of astronomy. He caused the great treatise of Ptolemaios in Arabic (the Almagest) to be translated into Sanskrit by a Pundit called Jaganaseh (the translation is known as the Siddhanta Samrat). He possessed the tables of La Hire, and the star catalogue of the astronomer royal Flamsteed. He caused observatories to be built at Jaipur, Delhi, Benares, Ujjain, and Mathura. The latitude and longitude of the Observatories were determined (the last with reference to Paris) by the Jesuits Boudier and Andreas Strobel. At Jaipur an astronomer named Don Pedro de Syiva was his adviser. Hence he had access to European as well as to Arabic astronomy, but he preferred Arabic. At first he made a brass Astrolabe according to Arabic models. As on account of difficulties of suspension and of inaccurate divisions, these were not accurate enough, so he began constructions in limestone and marble, with which he hoped to make better observations. As he himself tells us he invented himself three instruments Samrat, Jai Prakash and Ram Yantra. Samrat is a Sun-clock with the figure plated in the Equator which was well known to the Greeks, the Arabs, and the Germans. Jai Prakash is a hemisphere open above, divided into sections and provided with cross-wires for observing the positions of the stars. The construction of this as well as of the Ram Yantra was known to the Arabs and Jai Singh's share in the work seems to have been to construct them on a large scale and with greater accuracy. There were some other instruments also and a few

more were added by Madhu Singh, his son. The Delhi Observatory was built in 1724, and observations were taken in 1729. Jai Singh published a table of planetary and stellar positions, and showed that the tables of La Hire, which were then regarded as the most accurate in Europe, were wrong as regards the position of the moon by 2°, and the calculated time of eclipses was wrong by 6 minutes. The tables were dedicated to the emperor Muhammad Shah".

Sawai Raja Jai Singh died in 1737, and astronomical science died with him in India, in spite of our admiration of the astronomer-king, we are forced to remark that he was the last representative of an empiring age! He had apparently either not heard of telescopes which had already appeared in Europe, or failed to appreciate their great usefulness.

The Cultural Influence of European Astronomy

Modern European astronomy begins from the time of Copernicus, a Polish monk who published his heliocentric theory of the universe. He showed that the motions of the planets could be better explained if the Sun were placed at the centre of the universe instead of the earth, and the planets along with the earth were regarded as moving round the Sun in circles. This simple theory not only gave a better explanation of the motions of the planets, but it created a revolution in human thought. For the idea pursued to its logical limits, meant the doom of Sacred Pages, of God men, and of all classes enjoying privileged positions, for had not man been accustomed and sedulously taught in all ages to regard himself as a reproduction of the creator, to regard his little city or country or his tribe as specially favoured of God, the object of His special attention to the exclusion of others? But now the Earth becomes a tiny object, one amongst many, playing a vagrant course in space. We can therefore understand the rage of the Priest and the Potentate, the men who burnt Giordano Bruno for

teaching the heresies of Copernicus, and imprisoned the great Galileo—who by his invention of the telescope enabled mankind to penetrate further into space beyond the dreams of poets and seers, and by his discovery of dynamics placed a wonderful instrument of thought for analysing the secrets of Nature,—to lifelong imprisonment and persecution.

But the blood of the martyr is the seed of the Church, and the new Church which grew, the Church of Science and Reason, has been a more powerful factor in welding the destinies of mankind than religion or politics. In the words of Oswald Spengler, the new Church has a Faustian Soul, striving for the limitless.

It is not my object to describe the achievements of modern science or of the recent progress in Astronomy. My object has been to show that Astronomy has a great cultural value, and its possibilities are infinite, for it takes the limitless space with millions of island universes for its subject of study. No poet in his flights of imagination could ever dream of the picture of the universe which has been revealed by the patient study of the astronomer-savants of the past and the present age. Think of the fact that this great Earth in which we live is a mere tiny speck of dust which separated from its parent, the sun, millions of years ago, still continues to go about it, being guided by the mysterious law first revealed to Newton: think of the great Sun, thirteen million times bigger than the earth, and containing a huge store of energy cruising in space with its family of planets towards a point in the Hercules gaoun with the enormous velocity of 26 kms. per sec. Think again of the fact that the sun is but a second class member of the myriads of stars forming the Galaxy (the milky way). The Galaxy to which we belong is again one of many millions which are cruising past each other with enormous velocities sometimes approaching 11000 kms. per second. And then comes a Kirchoff who shows that yet in spite of these enormous distances which separate us from our nearest neigh

THE LICK OBSERVATORY

[Reproduced from Zittel's Geschichte der Geologie und Paläontologie, p. 598.]

hour, we can study the chemical composition of these stars with as much facility as that of a piece of stone on the earth.

The cultural value of astronomy has been recognised by all the advanced nations of the present day. Kings, and potentates, and business magnates in the West have vied in the past with each other in founding and endowing the modern Temple of Marduk, the interpreter of the Cosmic Will to mankind. In the new Atlantis (America) there are hundreds of observatories with 2,500 professional astronomers, and many amateurs, and the greatest of them, the Mount Wilson Solar Observatory erected at a height of 7,000 ft. amidst the blue sky, and provided with a hundred inch telescope, owes its inception to the munificence of the late Mr Andrew Carnegie. Wonderful results have come out of this observatory: the diameters of stars have been measured, vast distances have been explored, the physical constitution of hundreds of stars has been observed, and the discovery has been made that besides our Milky way, there are hundreds of other Galaxies moving past us with enormous velocities. The exploration of the universe has just rendered the maxim of Einstein possible that the universe though without boundary, is not infinite. Not content with this observatory, the Americans are building a second one for housing a two hundred inch telescope, when this new Observatory comes into existence many new revelations are expected.

Lick Observatory Mount Hamilton

The story of the erection of these observatories is sometimes very entertaining. The Lick observatory which comes next to the Mount Wilson, was founded on the endowments left by Mr. Lick who earned a huge fortune on the Pacific coast during the early days of migration to the West. Having no children, he did not know what to do with his fortune. The story goes that he wanted to erect a huge bronze statue of himself and his wife, surpassing the famous Colossus of Rhodes in size, and wanted to place these statues on the San Francisco Harbour overlooking the

Pacific Ocean. Some educationist came in time to know of this project, and was able to persuade him to the belief that an astronomical observatory would be a more fitting memorial to his munificence than a modern bronze Colossus.

It is a great pity that in spite of the fact that in the past, India produced a number of great astronomers like Aryabhata, Brahmagupta and Bhāskarācārya, at the present time, she possesses no astronomical observatory worthy of her traditions, excepting a State observatory at Kodaikanal in Madras, and one at Hyderabad-Deccan founded by the munificence of H. E. H. the Nizam. These two observatories have done quite creditable work in spite of their limited resources. But compared to the great European and American observatories, these are merely babies. The Astronomer king (Raja Jai Singh) has yet found no successor amongst the Indian princes. Yet though lacking in a first class observatory, some very notable contributions to theoretical astronomy have been made in India in recent years. The importance of the ionisation theory has been recognised in Europe and America, and half the papers in Astrophysics are now on the application of the Ionisation Theory to problems of stellar structure. In 1921, Prof. H. N. Russel, a foremost astronomer of America wrote:—

"The possibilities of the new method (Ionisation Theory) appear to be very great. To utilize it fully, years of work will be required to study the behaviour of the elements mentioned above and of others, in the stars, in laboratory spectra, and by the direct measurement of ionisation; but the prospect of increase of our knowledge, both of atoms and of stars, as a result of such researches, makes it urgently desirable that they should be carried out".

I have remarked elsewhere that the great scientific activities of the West European nations means a virtual return from the worship of the rigid God, of codified scriptures to the worship of the Nature Gods, as was the practice in early times and amongst early nations. But worship now means

the act of knowing Nature, and the laboratories and observatories have rightly taken the place of Temples. So long the different Nature-phenomena have been investigated on distinct lines, but now Einstein comes forward with the bold idea that all Nature-phenomena, Electricity, Graviration and Light—are due to the metrical properties of space. If we may use the figurative language of the Vedic poet, this reduces to the oldest Vedic conception that all Nature-gods are the children of Dyaus Pitar-the God of limitless space. The Hindu University has not yet constructed a Temple for the investigation of space according to the Einsteinian conception, and this is a very great omission.

We would therefore appeal to the Indian princes, merchants and other rich men that in the great city of Benares, where Buddha, two thousand five hundred years ago preached the gospel of Love and Amity, and where in the present times, the foundations of a great temple of Learning have been laid, they should erect a Temple dedicated to the service of Dyaus Pitar—the great God of limitless Space, the father of all Gods—who guided the unsophisticated Aryan nomads in their primitive wanderings, and endowed them with the yearning after the Infinite, the Beautiful, and the Truth which is the heritage, and characteristic of the great Aryan race!

MEGH NAD SAHA

Finsen may be looked upon as the father of modern light therapy He began his pioneering work in 1893 and achieved great success in the treatment of lupus, a tuberculat skin disease very difficult to cure Over 1100, out of about 1200 cases were greatly improved as a result of light treatment The next important step in light therapy was taken in 1903, when Rollier, who has been described as the "High Priest" of modern sun worshippers, established a sanatorium at Leysin, in Switzerland, for the treatment of tuberculosis by sunshine. Great success was obtained, specially with surgical tuberculosis and since then light therapy has become an important feature of medical practice. Both Finsen and Rollier attributed their success in the treatment of diseases to the ultraviolet portion of the solar spectrum. Light therapy has been more successful in the high Alps than elsewhere, not only because of the large amount of ultraviolet radiation available, but also because the snow absorbs heat rays and reflects ultraviolet rays. On a clear day the amount of radiation at 6000 feet is roughly one and a half times that reaching the earth at sea-level. It is not always necessary to expose a patient to direct sunlight, as there is a sufficient amount of indirect ultraviolet radiation in the diffused light from the blue sky.

The quartz mercury vapour lamp is very convenient in studying the influence of ultraviolet rays on the human body in general treatment and it seems to have been established that ultraviolet light plays the preponderant rôle in light therapy and its application is constantly increasing Recent years have witnessed great expansion in light therapy and at present the provision of lamps and accessories has become quite an industry. Two types of lamp are in use for the treatment of diseases; the air cooled "sun lamp" for general application or for the treatment of large areas and the water-cooled apparatus for local applications. The

air cooled lamp seems to be adapted to yield a radiation containing larger proportion of rays of wavelength exceeding 3000 A°, while the water-cooled lamp is designed to give out an intense radiation much of the energy of which is in the form of rays of wavelength less than 3000 A° To secure more effective action, optical sensitizers are sometimes applied to the surface to be irradiated These sensitizers may be dilute solutions of eosin or some other dye or calcium chloride solution.

Regarding the comparative influence of light on different individuals, Pacini (Outlines of Ultraviolet Therapy, Chicago 1923) writes "Speaking generally light people respond more promptly than dark females than males, the young sooner than the old; and the regions usually protected from the light and of high nervous sensibility."

If general irradiation is intended it is advisable to begin by fractional exposures. A fresh part is exposed at each sitting and the previously treated portions are exposed for longer periods.

Ellis and Wells (Chemical Action of Ultraviolet Rays, p 257 (1921)) state. "To ascertain the effect upon the skin, eyes and general condition, Bach resorted to a heroic test He applied the ultraviolet light with great intensity upon his own person without protecting his eyes. An exposure of 30 minutes was given at a distance of 16-20 inches from a 3000 candle power lamp The head and body were treated alternately After three minutes, there was a sensation of warmth and after 10 minutes, a burning sensation at the place of exposure An intense reddening appeared in 2 or 3 hours after the treatment This discoloration disappeared in three days. There was no blistering, but the epidermis became hard and dry and peeled within a week, being replaced by a new epidermis, which was elastic and brown. The conjunctiva commenced to redden in about two hours after treatment, being inflamed and painful but the inflamation disappeared in about three days without treatment, immediately after the treatment and for days

thereafter, there was a feeling of freshness and increased energy. This effect perhaps may be expressed as a case of over-stimulation of a person in good health."

In actual practice the ultraviolet radiation is used either as the principal remedial agent or as an adjuvant to other therapeutic measures.

According to L. Hill (Proc. Roy. Soc. B. 102 119 (1927)) sunlight focussed on the skin through a solution of 3% quinine sulphate, which absorbs rays of the mercury vapour lamp shorter than 4200 A°, does not produce erythema, if the skin is kept cool by running water. The rays, effective in producing erythema, seem to lie in the ultraviolet. From rough experiments, Hill concludes that erythema producing rays of the sun lie mainly between 3300-3000 A°. There also appears to be a correspondence between the acetone methylene blue fading and the erythema producing power of the sun's rays. The experiments of Hausser and Vahle (Strahlen therapie Vol. 15, p. 39 (1922) seem to be more precise. Using the mercury vapour lamp radiations of equal intensities as measured by a thermopile, they have found the maximum erythema production to be at 2967 A°. At 3131 A°, the erythema production was only 4.5% of that at 2967A°. While the erythema producing power of rays of wavelength 3131 A° is relatively weak, the intensity of sunlight in this region is sufficient to be effective. The rays of the sun which exert an antirachitic influence and which can synthesise vitamin D from ergosterol lie between 3200-2900 A°.

What an important place light therapy occupies in modern medicine can be seen from the following quotation from an "Interim Report on Artificial light and X'ray Therapy" by Cruickshank and Watt (published by the Scottish Board of Health, 1923).

"Hitherto where growth has been deficient or function defective we have had recourse to material remedies. In ultraviolet radiation a new form of treatment is at command. The extent of its therapeutic uses is as yet unknown

but experimental investigation has shown that its therapeutic properties are in the main limited to conditions of growth or of function that are below normal. For example, it has been found to increase body weight, to increase the rate of growth, to improve the mineral content of the blood, to increase the functional activity of the endocrine glands, to increase the bactericidal power of the blood, etc., where they are below normal but to have no corresponding effect on normal individuals. We found in the course of our enquiry that without exception every patient undergoing light treatment experienced an improvement in his or her general feeling of well being, apart altogether from improvement or otherwise in the disease for which the treatment was being given."

Cruickshank and Watt report that visible light leads to a dilatation of the cutaneous vessels, stimulating the sweat glands and aiding the relief of deep seated congestion.

The rays of shorter wavelength are absorbed by the thinnest layer of the epidermis. On the other hand, rays of longer wavelength can penetrate to appreciable depths. The following results of Glatscher and Hasselbach (Brit. J. Actinotherapy 1, September, 1926) illustrate this point of view.

TRANSMISSION BY EPIDERMIS

Wavelength in A. U.	Percentage transmission by 0.1 mm. thickness	1 mm. thickness
4360	59	0.5
4050	55	0.5
3660	49	0.08
3540	42	0.02
3130	30	
3015	8	
2990	2	
2970	0.03	

WHAT IS THE FUNDAMENTAL ACTION OF THE LIGHT RAYS?

From their researches on the photo-oxidation of food materials by air in sunlight at the ordinary temperature, Palit and Dhar have concluded that the light absorbed by

the system accelerates the metabolism of food materials in the body. The person then has a sense of well being and disease is avoided. Sunlight is appreciably transmitted by the epidermis, and by absorption of light the body cells are activated and hence increased oxidation of carbohydrates, fats and proteins take place. It seems to be accepted on all hands that several diseases are caused by defective metabolism and as such sunlight should prove efficacious in the treatment of these diseases

PHOTO-OXIDATION OF CARBOHYDRATES, FATS AND NITROGENOUS SUBSTANCES BY AIR IN SUNLIGHT —

It has been shown by Dhar and Satyal (J. Phys. Chem. 29, 926 (1925)) that methyl alcohol, ethyl alcohol and glycerol are oxidised by passing air on the ordinary temperature in the presence of sunlight.

Palit and Dhar (J. Phys. Chem. 32, 1263, (1928), 34, 993, (1930)) have made a systematic investigation of the oxidation of various substances by air in sunlight at the ordinary temperature They have shown that different carbohydrates, glycogen, urea, glycine, hippuric acid β-alanine, sodium urate, potassium palmitate, stearate, oleate, sodium formate, tartrate, oxalate, lecithin, cholesterol, butter, milk, egg-white, egg-yellow, etc., can be oxidised photochemically by passing air Some of the experimental results are recorded below —

Substance used in the expt	Weight of substance taken	Amount oxidised	Percentage amount oxidised
Arabinose	0.1000 gm.	0.0075 gm.	7.5
Galactose	0.0861 "	0.0067 "	7.8
Cane sugar	0.0964 "	0.0098 "	10.2
Glucose	0.0942 "	0.0144 "	14.9
Levulose	0.0918 "	0.0109 "	17.5
Lactose	0.0977 "	0.0197 "	19.7
Maltose	0.1097 "	0.0280 "	20.0
Starch	0.1027 "	0.0399 "	30.0
Glycogen	0.0987 "	0.0190 "	19.7
Glycerol	0.2500 "	0.0400 "	16.0
Urea	0.3000 "	0.0175 "	5.7
Glycine	0.0950 "	0.0096 "	9.6
α-alanine	0.0997 "	0.0360 "	36.6

Hippuric acid	0.0453	"	0.0069	"	14.2
Sodium urate	0.0420	"	0.0082	"	19.6
Potassium stearate					40.0
Oleate					31.5
" Palmitate					36.7
Sodium tartrate	0.0589	"	0.0079	"	31.3
Sodium formate	0.0757	"	0.01467	"	19.3
Potassium oxalate					29.8

Moreover, it has been shown that in the presence of zinc oxide ferric and uranium nitrates, which act as photo-sensitisers, the amount of oxydation of the foregoing substances is greatly accelerated.

It will be interesting to note that Einstein's law of photochemical equivalence is applicable to the photo-oxidation of glucose, lactose and alanine. In the case of glycine, however, seven molecules are oxidised per quantum of light absorbed. All the above substances are completely oxidised to carbon dioxide and water, without the formation of intermediate products. Hence light accelerates the oxidation reactions on which animal life depends. Palit and Dhar have also carried on comparative experiments on the oxidation of egg-white, egg-yellow, starch, butter, glucose, cane sugar and glycogen in sunlight and the following are the results —

Egg-yellow	60.9 %
Egg-white	31.25 %
Starch	34.2 %
Butter	31.8 %
Glucose	15.6 %
Cane sugar	7.4 %
Glycogen	7.0 %

It appears, therefore, that egg yellow is the most easily oxidisable substance in presence of light, then comes butter, which is oxidised with greater ease than sugars, which are the least oxidised. These experiments are close imitations of the biological oxidations, a similar order regarding ease of oxidation in the animal body was observed by Carl von Voit, the great physiologist from feeding experiments.

These results on the oxidation of food materials by air in sunlight are suggestive and the beneficial influence of light in the treatment of disease may be due to an increased metabolism in light. Dhar (Chemie der Zelle und Gewebe 12, 217, 225, 317, (1925); 13, 209 (1926)) has emphasized the importance of sunlight in the treatment of deficiency diseases; and it seems likely that rickets, osteomalacia, beriberi, pellagra, diabetes, pernicious anaemia, cancer, etc., would have been more prevalent in poor tropical countries like India and China, had not the compensating agent, sunlight, been present.

Finsen (Biochem. Z. 150, 36 (1924) in his investigations on the effect of solar radiation on rabbits noticed a stimulation of the protein metabolism as shown by an increase in nitrogenous excretion. Sensitisers like the various dyestuffs and potassium iodide still further increase the nitrogen excretion.

Moreover, Dhar has obtained marked beneficial effect of sunlight in the treatment of diabetes, which is caused by the defective metabolism of glucose, although Sampson (Physiotherapy Technic, St. Louis (1923)) considers that diabetes is not amenable to ultraviolet light therapy, but he admits that this has not been the experience of others. Bach (ultraviolet light, New York (1916)) has successfully used ultraviolet light in the treatment of diabetic gangrene.

Ellis and Wells (Chemical Action of Ultraviolet Rays, page 270 (1925)) make the following interesting statement regarding the comparative position of light therapy in medical science. "So far from serious burns being caused by ultraviolet rays, exposure to these very rays is becoming a favourable measure to relieve pain and to promote healing in ordinary burns, in X-ray dermatitis and in sunburn.

Much of the practice in ultraviolet radiation is empirical. This is, however, true of most important advances in

therapeutics. Quinine in malaria, mercury in syphilis, iron in chlorosis, ipicac in dysentery and the majority of our most valuable remedies entered in the pharmacopia, not through the portals of the pharmacologist's laboratory but in consequence of accidental discoveries of lucky guesses, and not infrequently with credentials endorsed by alchemists, astrologers, magicians and the medicine men of savage races".

N. R. DHAR

ON THE DEVELOPMENT OF ELECTRO-CHEMICAL INDUSTRIES IN INDIA

Those of us who have had the privilege of coming in close touch with Pandit Malviyaji, know full well that one of the subjects in which he is deeply interested is the industrial development of India. His work as a member of the Industrial Commission, the note that he has appended to the Report of that Commission, the establishment of a first class Engineering College, and the opening of the Departments of Geology, Mining and Metallurgy and of Industrial Chemistry in the Benares Hindu University, all bear ample testimony to his burning interest in the industrial development of the country.

When, therefore, I was asked to contribute an article to the commemoration volume to be presented to Panditji, I felt that I could not do better than to write something in connection with the subject that is so dear to him. I propose to write, therefore, on the possibilities of starting electro-chemical industries in India.

A little thought will convince any one that at the basis of several important industries lies the manufacture of chemicals. Whether it is the manufacture of paper, glass, or dyes, or whether it is soap, matches, leather, manures or metals, a large quantity of chemicals is required. It is only with the help of these chemicals that the manufacture of the articles mentioned above is possible. The question of prime importance is, whether these chemicals can be manufactured in India, before the other big industries which depend upon them are tackled. If the required chemicals have to be bought from abroad the industries which depend upon them must suffer. For instance, it is very difficult for India to compete with the foreign manufacturer in glass, soap and paper as long as it has to buy its caustic soda and potash from abroad. To start industries like glass, soap, leather,

dyes, etc., before the chemicals required in these industries are manufactured in the land, is to put the cart before the horse. If therefore, India is to become an industrial country, it has first to take up the manufacture of chemicals required in the more important industries.

To come to concrete instances, the chemical which is required, directly or indirectly, in by far the largest quantity, for the manufacture of a large number of substances is sulphuric acid. It is used in the manufacture of soda, in the preparation of almost all important acids, in the manufacture of dyes, perfumes, matches, artificial silk, alums and other sulphates, super-phosphates in the refining of oils, etc. There is much truth, therefore, in the following remarks, 'If the demand for sulphuric acid is taken as the chemical barometer of industrial conditions, industrial activity in India is in its infancy.' (C. S. Fox). 'Without cheap local supplies of sulphuric acid, this country will never attain the position which the wealth of her mineral products warrants'. If India is to rise commercially it will have to face the problem of the manufacture of sulphuric acid in the land. At present very little of sulphuric acid is manufactured, and even for doing that, it has to import its sulphur from abroad. There is no doubt that at present there is not much demand for sulphuric acid but with the development of big industries, huge quantities of sulphuric acid would be needed. It may be said in passing that the manufacture of sulphuric acid is at present not an electro-chemical industry.

The chemical next in importance is sodium carbonate, commonly known as soda. This is largely used in the manufacture of glass, dyes etc. Similarly caustic soda, calcium carbide and chlorine are important chemicals, the last being used for the manufacture of bleaching powder, chloroform, etc.

How are these and similar other chemicals manufactured? Can we manufacture them in India, are questions which we should like to answer. The scope of the present article will not allow us to go into the method by which

these chemicals are manufactured, but one thing is clear, that in modern times, in the manufacture of bulk of these substances an electric current is used. Before the beginning of the nineteenth century practically all the chemicals were manufactured by using heat as the source of energy, the heat being generated by the burning of coal or oil in furnaces. The attention of the chemists and engineers was chiefly directed at that time towards perfecting the furnaces used to produce the heat, and the question of fuel therefore came in great prominence. When, however, Sir Humphrey Davy in the year 1807 split up caustic soda and caustic potash by the use of an electric current and obtained from them the metals sodium and potassium, a new epoch was introduced in the manufacture of chemicals, and instead of heat, electricity came gradually to be used as the source of energy. The method of obtaining chemicals by the use of electricity was, however, at that time rather clumsy and costly, and it was only when Sir Michael Faraday introduced the principle of electro-magnetic induction, resulting in the modern dynamo, that electricity as a powerful source of energy came to be used more and more in the manufacture of chemicals. In fact, in modern times the older chemical methods are gradually being replaced by the newer electro-chemical methods, and sodium carbonate, caustic soda, chlorine, bleaching powder, potassium chlorate, calcium carbide, phosphorus, aluminium and several other chemicals are now manufactured by the use of an electric current, and it is quite possible, that at no distant date the most important chemical, viz., sulphuric acid may be so manufactured. The attention of the chemists and engineers is therefore now chiefly directed towards obtaining cheap electric current.

The advantages which the newer electro-chemical methods possess over the older chemical processes are manifold. In the first place, the plant and the apparatus required for the actual preparation are considerably simpler in character and therefore less costly. There is no nuisance of smoke and poisonous gases and the danger to the worker

in the factory is consequently less, and what is most important is, that the process is very neat and clean, and the final product obtained is much purer and cheaper than the one obtained by the older methods

There is no doubt, therefore, that ultimately the energy required to disrupt substances and build up new ones, as in chemical manufacture, will chiefly be electric energy To manufacture chemicals in India, electro-chemically two things are required, (1) the raw materials and (2) a cheap source of an electric current. In the industrial world of today cheap electric power is an essential factor This power may be used for (a) driving machinery as in the textile mills of Bombay or (b) for producing high temperatures as in the electric furnace for producing calcium carbide, for the fixation of nitrogen or for electro-metallurgy, or (c) for actually bringing about chemical decompositions as in the case of producing alkalies, aluminium, chlorine, etc.

Regarding raw materials, India has plenty of them. India has, however, unfortunately been an exporter of raw materials. If only our rulers had during the last 150 years of their domination instead of exporting these raw materials abroad, had introduced the method of converting them into finished goods, three-fourths of the misery and discontent that we now see in India would not have been there It is a matter of shame that after a rule of 150 years, India should not be able to boast of one big chemical industry excepting perhaps the Iron and Steel works at Jamshedpur, and this, notwithstanding the fact that nature has endowed India with a bountiful supply of raw materials for all sorts of manufactures

What with the deposits of coal and other minerals in Bihar, Orissa and Bengal, with the mineral oil, tungsten, lead, zinc and silver ores in Burma, with the pure sands of Jumna and the rich clay deposits spread over many parts of the peninsula, with the rich salt range at Khewra and the abundant supply of sea salt on the coastal lines of the country, with the bauxite, spread over the greater portion

of India, with the limestones in the Central Provinces, the rich oil seeds of Bihar and Madras, the sugarcane in the United Provinces, Bihar and Bombay, the cotton of Khandesh, Broach and other parts of India, there is field for the manufacture of all sorts of chemicals and other substances. The policy which the Government have, however, adopted was to allow these rich mineral products to be exploited and exported for the good of the foreigners and the result is, the India of the present day; miserable, discontented, half-starved and three-fourths naked India sells her raw materials cheap and purchases all the finished products from abroad, little wonder then that it has remained a poor country To sum up, India has plenty of raw materials required for the manufacture of important chemicals. This is quite clear from Table I given on the following pages.

Next comes the question of obtaining cheap electric power, if India is to manufacture the chemicals electro-chemically Here again Providence has been very kind to India, and there are enormous possibilities of obtaining huge amount of cheap hydroelectric power from numerous water falls and rivers at several places in India It is a matter of great pity that so far only a few of these sources are tapped. The horse is ready, it has only got to be harnessed to get work out of it. This horse does not require feeding, and the maximum amount of work can be taken out of it without fear of inflicting any cruelty to the animal These horses (water falls and rivers) are ever running and thus spending their energies uselessly They are required to be harnessed so that their energy, otherwise wasted, might be utilised for some fruitful purpose. Oh, what a gift of Nature! It is doing an enormous amount of work for man in raising the water of the seas, the rivers and the lakes, up in the air in the form of vapour and clouds which ultimately come down in the form of rain and a large quantity of water collects itself on the tops of mountains. Stored in this water is the huge amount of energy which Nature has gathered together for us, and when this water falls down

TABLE I

Table showing the Occurrence, the Output and the Value of the more important minerals in India

The output and the value are average for the years 1924 1928

Mineral	Place of Occurrence	Output and value	Remarks
Bauxite	Bihar, neighbourhood of Kurai, (recent deposits) Sarabi, Sonl (C.P.), Kalapani Jam, Chain Nagpur Bihar, Amon, Bhopal Kaira State, Sawar, Kaira (Bombay) Mysore and Jeypore	4,147 tons. 18,455 £	Extensively used for the manufacture of aluminum and in the preparation of alums and aluminous salts.
Chromite	Baluchistan Hyderabad, Singhbhum	43,795 tons. 49,224 £	It is the source of iron chrome alloy used for chrome steel and stainless steel, salts of chromium are of importance in tan.
Clays	Bihar and Orissa, Mysore, Delhi Bengal, Central Provinces	5 58,940 tons. 86,658 £	Largely used in pottery porcelain and sanitary.
Coal	Bengal, Bihar, Orissa, Central India, Central Provinces Assam Burma, Hyderabad State, Punjab, Kalpatana	21 151 607 tons. 8 505 764 £	In the running operations there is much available iron, notwithstanding this large output India has to import coal from abroad.
Copper ore and Copper matte	Singhbhum Hazaribagh Sonbhadra Jaipur, Kherwara	25,549 tons. 204,901 £	There is a wide scope for copper industry in India
Gold	Kolar (Mysore) Hutti (Hyderabad), Dharwar (Bombay), Anantapur (Madras)	588,944 (oz) 1,681,881 £	
Iron ore	Singhbhum, Bonderpur States of Orissa, Chanda Dhar (C.P.), Kolar (Mysore) Goa, Ratnagiri (Bombay).	1,710 583 tons. 111,971 £	The iron ore deposits of Singhbhum and the states of Orissa are remarkable for the enormous quantities of extremely rich ore they contain, "and will undoubtedly prove to be amongst the largest and richest in the world" (Cecil Jones)
Lead and Lead ore	Bawdwin (Northern Shan States Burma)	66,632 tons 1,655,749 £	The ore reserves of Bawdwin, actual and probable are big enough to make Burma one of the chief lead producing countries of the world.

Mineral	Place of Occurrence	Output and Value	Remarks
Manganese ore	Gangpur Karaikur Singbhum (Bihar and Orissa), Balaghat, Bhandara, Chindwara Nagpur (C.P.), Chota Udaipur, Belgaum, Panch Mahal (Bombay), Sandur Sara, Vizagapatam (Madras), Chikkaburg Shimoga, Tumkur (Mysore)	739,140 tons. 2,011,331 £.	In the year 1924 India was the greatest manganese ore producing country of the world. The metal manganese is largely used in making steel
Monazite Sand	Salem (Madras) of Travancore	214 tons. 1,049, £.	Valued for its thorium and cerium clay crucible "The Indian monazite deposits are undoubtedly the largest known in the world while as regards quality the Travancore material easily comes first." Brown
Mica	Monghyr, Hazaribag Gaya (Bihar) Nellore (Madras) Rajpuram, Travancore	34 143 cwt. 1,37 938, £.	For many years India has been the chief producer of mica in the world, with an output of three-fifths of the world's total.
Petroleum	Assam Burma and Punjab	290 171,859 gals 6,918,229 £.	
Salt	Sea coast Bombay Madras and Burma, Sambhar (Rajputana) salt range of Kohat and Mianwali, Khewra salt range (Punjab)	1,188,222 tons 141,466 £.	"In Kohat, the rock structures are said to be practically inexhaustible" Brown. India has still imported on an average per annum (1924-1929) 180 941 tons of salt from abroad.
Saltpetre	Plains of Bihar, United Provinces and the Punjab	131 211, tons 121,221 £.	At one time India possessed practically the monopoly of the world's supply of saltpetre and is largely in the manufacture of explosives and surrogate.
Sand	Raniganj Pit (Bengal) Lagkia and Bangali near Nasik (B. P.), Baroda State Bihar		There is a lot of scope for glass industry with the good sand that is available, provided pots are manufactured in India.
Silver	Goodrich (Burma) Kolar (Mysore)	1,248,466. (ozs.) 719 148 £.	
Tin and Tin ore	Burma	3,382 tons. 112 646. £.	
Wolfram and Tungsten ore	Tavoy Thaton Amherst and Mergui districts of Burma in smaller quantities in Singhbum (Bihar) Jaipur Gaya (C.P.) Dogra (Mirpur Kashmir)	211 tons 36,192. £.	The metal tungsten steels of Dogra wolfram has numerous uses. It is used for filaments, for resisting high-speed tools etc
Zinc concentrates	Jawar (Rajputana), Bawdwin, Namyat Mandalay Shan States (Burma)	41,346 tons. 176 141 £.	

from the mountain tops, this huge amount of energy is let loose. We are however not harnessing the horses, but are watching the energy being wasted, when we see the water coming down once more to the plains and finally passing into the sea. Oh! what a waste of energy! England is crying hoarse over the question of the wastage of coal when the coal does not undergo complete combustion in the furnace, but here in India, we are watching with folded hands this huge wastage of energy, million times greater than the wastage of the energy of the coal. What we have got to do is to use the energy of the running water to turn a water turbine and use the turbine for driving a dynamo, so as to convert the energy of the falling water into electrical energy.

It must be confessed, however, that the problem is not so simple as it might appear at first sight for, one of the most essential requirements for the success of a hydro-electric scheme, intended for electro-chemical manufacture, is that the current available must be very cheap. A small hydro-electric station, intended for pumping water or for supplying lights, fans and for other domestic uses or even for running small mills, can be a success, as the stations at Simla, Mussoorie, Darjeeling, Gokak and other places show. The current in such cases can be supplied at 2 or 3 annas per unit and the consumer would not mind paying the same or even more. But no electro chemical or electro-metallurgical process can work profitably if the charges are so heavy. For instance, to prepare calcium carbide the current required must not cost more than 0.1 anna per unit and that for aluminium 0.2 annas per unit. In America and Scandinavia which are the leading countries in the world so far as hydro-electric schemes are concerned, the current is generated from the water power at from 0.1 to 0.05 annas per unit. 'The principle reason why India has been able to develop water power only to a limited extent' says the Report of the Industrial Commission, 'is that the seasonal character of the rainfall makes storage works in most cases a necessity and the outlay involved in their construction is likely to raise the

cost of the power', etc. In most centres where there is a possibility of erecting hydro-electric stations it is found that there is an excess of water during the monsoons and a great shortage during the hot season. This means that either huge dams must be built, as at Lonavla, in order to retain the water during the rainy season, and subsequently use the excess of water in the dry season or the factories which depend on the electric supply must be closed down during the period of drought when no current can be obtained. The first alternative means an enormous initial expenditure while the second means the locking up of the capital for several months.

The other difficulty is, that water power does not usually occur where it is wanted, which means that we have to transmit the power to the place where the factory is located or to carry the factory and the raw materials required, to the power station. The latter alternative entails a lot of transport difficulties, while the former, that is, transmission of power over long distances, presented serious difficulties till quite recent times. Thanks to recent researches, 'from small beginnings electric transmission of power has now reached a stage where it is possible to have the factories 250 miles or more from the power station'. There is of course some loss of energy in transmission, but with an efficient system this loss can be reduced to 10 per cent which is not much.

There is no doubt therefore that a large initial expenditure is needed on the hydro-electric development and on the long transmission line, and the cost of construction is therefore invariably higher than that of a steam driven plant, but in the long run this loss may be counter-balanced by the fact that the running cost is relatively very low, because no fuel is needed. It is possible to supply power at 0.1 annas per unit including all charges, provided the condition of the hydro-electric plant is such that the construction on a large scale is reasonably cheap, the locality is such that there are enough facilities for transport of the plant and material, and the distance to which the power is transmitted is reasonable.

TABLE II

Table showing the hydro-electric schemes, etc. at present in India

Province	Undertaking	Location	Source of Supply	Working Head in Ft.	Plant Installed	Energy in Units	Area investigated for any developed K.W. minimum	Energy (in all which detailed information is available) Available K.W.
	Anaikut Valley	W. Ghats near Poona	Anaikut Lake	[illegible]	[illegible] K.V.A.			
	Shughe	[illegible] miles from Poona [illegible] miles from Bhore	Lake [illegible]	[illegible] to [illegible]	[illegible] K.V.A.		[illegible]	[illegible]
	Gokak Mills Co.	Gokak W. Ghats	Ghataprabha river	[illegible]	[illegible] K.V.A.			
	Tata H. E. E. E. Co.	[illegible] W. Ghats	Shirawata Waghoba and Lonavla Lakes	[illegible]	[illegible]	[illegible]		
	Bawm mines	Namtu N. Shan States	Namtu Falls on Nam Tam Trib. of Namtu	[illegible]	6,000 K.V.A.			
	Kelly mines	Mogok Upper Burma	Yazee and Taylee Streams	[illegible]	[illegible] K.V.A.		[illegible]	[illegible]
	Kodook mines	Tavoy	Sin Yu Chaung	[illegible]	[illegible] K.V.A.			

Table II shows the existing hydro-electric schemes at present in India and some information regarding the same.

The table given above shows the work that has been done, but much more remains to be done, and it is for the future expert hydro-electrical engineer to explore and find out newer sources of water power. The following two quotations, however, will give an idea of the possibilities in this connection. 'We know of the existence of vast resources of water power in the Western Ghats, in addition the capabilities in this respect of the Assam Plateau, the Nilgiri Hills, the Central Provinces and Burma, all seem promising and need careful investigation' (Indian Munitions Board Hand Book, page 131). 'Undoubtedly the most important sources of water power immediately available are to be found in the streams and rivers draining the Himalayas, but no profitable application of it has yet been discovered excepting for electric lighting at Darjeeling and Simla' (Report of the Industrial Commission).

The map given below shows the chief water power areas and location of some of the important minerals, of India (Hydro-Electric Survey of India. Triennial Report 1919–1921).

Given cheap electric power, the following electro-chemical industries can be developed in India.

(1) *The alkali industry.* Common salt is plentiful in India, both as rock salt and as sea salt, and from it caustic soda and sodium carbonate can be manufactured. The chlorine obtained in the process as a by-product can be used for preparing bleaching powder, potassium chlorate, chloroform, etc. Caustic soda and bleaching powder are very important chemicals used in arts and manufacture.

(2) *Fixation of Nitrogen.* This means converting the nitrogen and oxygen of the atmospheric air into nitric acid and its salts. During the late great war Germany was blockaded by the allied powers, and the supply from outside of alkali nitrate, required for the growing of the wheat

crop and for preparing munitions, was thus stopped, and it was expected that Germany would have to surrender simply out of starvation and also for want of munitions. Germany however rose to the occasion and saved the critical situation by preparing her own nitrate by the process of fixation of atmospheric nitrogen. It is quite possible to manufacture nitric acid and nitrates by this process in India, in the Western Ghats or in the northern portion of the Himalayas.

(3) *Calcium carbide industry.*- Since there is plenty of calcium carbonate spread over several parts of India, it can be easily converted into calcium carbide and calcium cyanamide. The former is used for producing acetylene

required for oxy-acetylene blow pipe while the latter is used as a nitrogen manure.

(4) *Electro-metallurgical processes* The electric treatment of the iron ores of Mysore, Goa and Ratnagiri, the manganese ore of the Sandur Hills, the bauxite ores of the Western Ghats, Central Provinces and Chota Nagpur (for aluminium), the wolfram of Tavoy (for tungsten), the chromite of Mysore (for chromium), the copper ores of Sikkim and the preparation of various rare metals for use alone or as alloys, are quite within the range of possibilities, provided the metallurgical processes get a continuous supply of an electric current from day to day, throughout the year, at a site affording transport facilities both as regards the assemblage of raw materials and the export of the finished articles to the markets.

Thus we see that there is a great possibility of industrial development in India, in the direction stated above, provided, there is a proper co-ordination of efforts on the part of the Government, the capitalists and the Universities It is the function of the government to undertake the prospecting work and to determine with the help of expert engineers, geologists and chemists, the sites where the hydro-electric projects should be located and then to start the same with the help of the capitalists The second function of the Government, in this connection, is to provide facilities for industrial education by establishing Technological Institutes at various important centres, for it is only these technological institutes that can provide the band of trained chemists and engineers which the industries of the country will soon demand Then come the Universities which have also to contribute their share to the solution of the problem.

We are now in the habit of iterating and reiterating the platitudinous statement that the function of a University is not merely to teach and examine its students but to carry on advanced researches in various subjects, with the object of adding to the stock of human knowledge, and without any regard to the immediate utility of such researches In

a country like ours, with its long established tradition of disinterested love of learning, it is not necessary to over emphasise the ideal of knowledge for its own sake. But a time is perhaps come when it is necessary to emphasise the need of directing University researches, particularly in the science subjects, more in the direction of the application of science to industry, than to solving problems of theoretical importance only. There is a tendency to criticise even Edison, one of the world's greatest inventors, and why, "because he was not a disinterested seeker after truth, was not concerned with pure scientific research, was not content 'to scorn delights and live laborious days,' for the sake, primarily, of adding to the sum total of scientific knowledge", and yet, he was "the leader in the development and application of inventions that have revolutionized civilization in the last century", and one "who has added more to the material elements of civilization by his own inventions and by what they have suggested to others, than any other one man in the history of the world." Edison himself is quite clear on the subject. Talking to an interviewer he said, "I always keep within a few feet of the earth's surface all the time. At least I never let my thoughts run up higher than the Himalayas."

The chief problem of India today, is the problem of bread and our primary duty is to try and raise two blades of grass where one is growing, in other words, to tackle the problem of the appalling poverty that prevails in our country, and which is sapping its manhood. The Universities are an integral part of the nation and they have their own part to play in tackling that problem. Part of the problem of Indian poverty is due to the paucity of industrial development and the antiquated mode of agricultural life. If it is the duty of the Government with the co-operation of the capitalists to establish big and basic industries, and thus to develop the industrial and agricultural potentialities of the country, it is also the duty of the Universities to give a decided utilitarian tone to the researches that are carried on under their auspices, bearing in mind the agricultural and the in

dustrial problems of the country. Says, Dr. Sudborough in his Presidential address at the Indian Science Congress, 'Is it presumptuous to suggest to the organic chemists of India, that they should study intensively the unique wealth of material which lies at their door, and devote less time to the study of problems of theoretical importance only?' Needless to say that his remark applies equally well to scientific researches in general in India at the present time. Much as we need researches in pure science, we need, researches in the direction of the application of science to the solution of industrial problems of our country, still more.

Let us hope then that the scientific departments of the Universities of India will co-ordinate their work and try to bestow more attention on the aspect of research mentioned above, so as to contribute their share to the revival of the prosperity of this ancient land of ours.

M. B. RANE

THE INTRODUCTION OF APPLIED CHEMISTRY IN INDIAN UNIVERSITIES

A real index to the growth and expansion of higher education in a country is the increase and extent of the number of its Universities. A University rightly understood has to cater for all the intellectual and vocational needs of a country. A civilised state of today has to further see to it that the education imparted in a University is made accessible even to a lay-man and is not confined merely to the academically trained and certified men. This is how in Germany and Japan, education of all kinds is made available and accessible to every needy citizen. Judged at from this standard, Indian Universities are lagging behind—both in quality and quantity.

To all appearances, the number of Universities in India is increasing. But is it really so? Is there any corresponding increase in the number and variety of the teaching institutions? Hardly any. Small institutions that were grouped together under the name of a large University are merely being split up and are made to flourish under new names! Further, the conservative nature of these Universities does not even enable them to move out of their old grooves. Although the consciousness is there, that education is being too much one sided, no serious effort is being made to give a *vocational* turn to education. It is high time, therefore, that Indian Universities turned their serious attention to this important aspect and diverted their time, energy and money, for introducing an efficient system of vocational and industrial training.

In this article it is proposed to make a survey of how far our Universities and other academic bodies have introduced this subject of applied chemistry and *how* it should be properly done.

The mother of all industrial training today, as it has been at all times, is the Science of Chemistry in all its branches

In a sense, almost every other branch of natural science overlaps with this to some extent or other There is, then, the theoretical and practical side of chemistry both of which must be taken care of equally The contribution of India to the growth of *theoretical* chemistry has not been negligible. The amount of original work done in pure chemistry in places like Calcutta, Benares, Lahore, Allahabad, Bangalore and others has been quite satisfactory both from the point of view of quality and quantity The deplorable part of it has been that in the line of applied chemistry, so little is being done and so little initiative is being taken by leading Universities in India, even at this late hour It must be borne in mind that while introducing Applied Chemistry, theoretical chemistry cannot be divorced but on the contrary a very close co-operation between the two branches is an absolute necessity. Although it is necessary that our Universities have got to carry on their research work in pure chemistry to keep our legitimate place in the scale of nations, it is still more necessary that the applied side of it should be taken up with greater vigour and greater earnestness, at least in the national interest of reducing the unemployment and the poverty in the country

Let us now look into the working of the different institutions and examine them one by one, so far as the applied side of chemistry is concerned.

Perhaps the oldest institution of this kind in India is the Indian Institute of Science at Bangalore It was the object of the great Tata of Bombay that we should have an institution in India where Indian youths could get all facilities for practical training in Chemistry. It is not only very troublesome but it is also very expensive to go out of India for such practical training and the great Tata wished that such an institution should be established at home. It was with this idea that a substantial donation was made and the Bangalore institute came into existence The institution is provided with everything that it needs, viz., well-planned buildings, a sanitary site an enviable climate, plenty

of funds and a substantial technical equipment. The institution has been in existence for nearly twenty years and what is the outcome? In spite of its long existence, it can hardly claim to have satisfied the wishes of the donor or of the public for whom it is supposed to be catering. The work done by this Institute in pure chemistry has not been overlooked by anybody but the primary aim with which it was started—for which the amount of the technical machinery which is almost resting is a proof—has hardly been fulfilled. It is high time that the authorities concerned should seriously think over the whole situation once more. The potentialities of this institute seem to be tremendous. The pick of the intellect of India can be attracted because there is enough money available by way of scholarships. What is needed is a practical turn to be given to the training in chemistry.

The next institution to claim our attention is the Sir Harcourt Butler Technological Institute at Cawnpore. This Institution has been in existence for some years and may be said to be still in the process of evolution. Only recently, the institution has shifted from its temporary abode to its permanent quarters. The Government of United Provinces, of all our provincial Governments, enjoys the reputation of being industrially the most progressive, and its efforts in the line of encouraging technical education deserve special mention. Thanks to their effort, the Technological Institute has practically all that it needs and it is hoped that the authorities will not fail to fulfil the high hopes that are expected of the institute. The institute has taken up three main industries apart from other general work and with the engineering facilities afforded by the Lucknow School of Engineering, it is hoped that it will train out men who will justify the investment made for their practical training.

Coming now to Universities proper, the Universities of the Punjab, Calcutta and Benares claim our attention. Three more Universities, viz., those of Bombay, Nagpur

and Andhra are also turning themselves and are trying to divert their attention towards applied chemistry and provided they entrust this work to competent hands, there is no reason why they should not achieve something substantial. The Universities of Patna and Dacca are apparently trying to do something in this line but at present it seems to be only an apology for an effort. The lack of seriousness in an enterprise is often politely explained off by a want of necessary funds and one does not know how far it is applicable here also.

The University of the Punjab is perhaps the earliest institution to have made a beginning in applied chemistry under its auspices. The Forman Christian College at Lahore, a missionary institution, deserves full credit for its being the pioneer institution in the Punjab in this line. It has a well equipped practical laboratory and has all the facilities for theoretical work. It has now instituted a full fledged honours school in technical chemistry, the first one of its kind in India. Thanks to the patronage of the Punjab University, other sister institutions like the D. A. V. College are also co-operating in this effort. In the F. C. College, not only a theoretical training being given but the institution is carrying out operations on a semi large scale in the manufacture of soaps which is bound to be a great source of inspiration and confidence to the students who get trained in it. Under the fostering care of the Punjab University, it is hoped that this subject will flourish day by day.

The University of Calcutta has also instituted a special course in Applied Chemistry but all at the M.Sc. Standard. Special courses in oils and fats, fermentation and enamelling, etc., are being given under expert guidance. Whereas in other institutions of a similar nature, the courses are started at the B.Sc. standard, the Calcutta authorities have begun all at the M.Sc. standard. This is perhaps overcrowding in two years what ought to be done in four. It is learnt that this aspect of the question is under the serious consideration of the authorities and it is proposed

either to extend the duration at the M.Sc. stage or to introduce it at the B.Sc. standard. As it stands, today, the course need more time than is being given at present. Another important drawback is that at present the courses are more theoretical than they are practical. A new work shop is being attached to the applied chemistry section and very soon practical work is expected to be carried on, so as to make the theoretical training truly practical.

The Benares Hindu University has opened its department of Applied Chemistry in the year 1921, thanks to the farsightedness of its great Vice-Chancellor Pandit Madan Mohan Malaviya. The aim which this department has placed before it differs from that of all others of its kind, not only in India but even outside. The department proposes to teach and also manufacture and sell if possible all that it manufactures. The manufacture is to be carried on, on what is called a "semi-large scale" not with the object of making money but with the definite object of creating the necessary confidence in the minds of those whom it teaches and trains and in equipping them with the necessary data to start their own concerns. During the few years of its existence, a number of the students trained in the department have been able to stand on their legs. It must be remembered, however, that a decade is not enough for any institution to show tangible results. The preliminary difficulties are very great. The nature and extent of the curriculum of studies, the type of the training to be given, the peculiar conditions of the market and its competition, the want of expert advice are all factors which require time and consideration. It is, however gratifying to note that the outlook is both promising and hopeful.

In this connection, there is one aspect of the question which needs special elucidation and that is, how far can or should an academic body be also a manufacturing body? In fact, many serious minded visitors who have visited this department have paused and discussed this question. More than the machinery and the technical equipment, this area-

demic aspect has been discussed with special interest. The central question is, can an academic institution successfully take up manufacture even on a semi large scale? Are not the two faculties and their surrounding atmosphere different? The reply to this question is, in *Indian conditions*, this can and should be done and an industrial atmosphere should be created round the purely academical. Not merely that, but wherever possible, say in industrial cities like Bombay, Allahabad, Calcutta, Cawnpore and others, not only should Universities create the industrial atmosphere but they should also give up their conservative and aristocratic ways and seek the co-operation of the existing factories. By doing so, they will be doing good to themselves and to the factories. For in countries like Germany, Japan and America, educational institutions are either *surrounded* by or *planted in* the midst of industrial areas so that the Universities need not establish the factory conditions under their own roof. Not merely that, the research work done in these factories under experts, whom the Universities are pleased to designate as Extraordinary (outside the ordinary) Professors, is recognised by the Universities for the Doctorate degree! Our Indian Universities have tried to make the right use of such factory areas and the facilities they offer for mutual benefit. Would our Indian Universities condescend to liberalise their industrial education in this manner wherever possible? Even in an advanced country like England, this aspect has not received the full attention it deserves. For, it is reported that one of the important problems discussed at the Edinburgh sittings of the recent Empire Conference of Universities was this very question of Universities co-operating with trade and industry. Several speakers urged that the factory owners should come forward and co-operate with the research workers in the Universities and vice-versa because in the world-competition today, English goods cannot compete successfully with those of the rival countries because the English methods are antiquated and need a complete over-hauling which could only be done

by an academically trained youth who is well trained in theory to find out new ways of improving manufacture. If that is the state of affairs of England, how much more applicable should it be to India where hardly a beginning is made? It has been one of the great secrets of German training that a 'Doktor der Philosophie or Ingenieur' is so well grounded in theory that in a few months of his getting into a factory, he makes himself indispensable for the working of new methods. This shows how in India, it is absolutely necessary to give a good grounding in the theoretical part of chemistry and also to create a factory atmosphere where it does not exist. If there be factories where the theoretically trained student can work as an apprentice—as in Germany and Japan—nothing better, otherwise, if any real contribution to industrial progress is to be made, the Universities have no other alternative but to produce their own industrial world, although on a small scale.

Let us now turn our attention to an enunciation of a few fundamentals and essentials regarding the introduction of applied chemistry.

The Science of applied chemistry presupposes a close correlation between three subjects, (*a*) pure chemistry, (*b*) applied chemistry, and (*c*) Engineering. Pure chemistry forms the solid bed-rock on which the edifice of applied chemistry is built up. There was a time when pure chemistry in its stages of infancy was ridiculed by a school of empirical workers who had succeeded in evolving a few successful recipes by a mechanical process of experimentation. These were guarded closely as trade secrets. As however, the knowledge obtained through researches in pure chemistry began to accumulate, secrets became ordinary facts and day by day new fields of work were discovered which the purely empirical worker was not even capable of grasping, most of the modern industries bear ample testimony in support of this statement. The mechanical expert is an asset but only in a limited sense of the term. So much

to show the intimate relation between chemistry pure and chemistry applied.

Applied chemistry, by itself, presupposes a *general* knowledge of many industries. There is such a thing as interdependence of industries and the knowledge of one industry *unconsciously* helps one in the improvement of another industry. It is not always by inspiration that industries develop. It is very often an unconscious evolution from step to step or from industry to industry that stirs up the talent in man and this coupled with the fund of general knowledge leads to greater and larger ideas. In German Universities, it has therefore been made compulsory that students who take to applied chemistry, the so-called "Chemische Technologie", are afforded full facilities to visit as many different factories as possible, no matter what special subject the student is studying. In his own special subject of course, he gets special facilities but during his visits, he carries so much information that *sticks* to his mind that in case of any difficulties he faces later on, he has plenty of ideas to fall back upon. In our poorly evolved Indian conditions also, it is all the more necessary to include this aspect of industrial training, in a course of applied chemistry.

Engineering—both mechanical and electrical—is a necessary adjunct to the study of applied chemistry. An applied chemist is not expected to be an engineer but he must be able to understand the language of the engineer and also to be able to interpret his ideas to the engineer. Very often he has not merely to erect machinery but he has also to devise his own apparatus and write out what he wants which means he must be able to draw and sketch. He has, therefore, not only to read a drawing but he has also to make one. In European countries, specialisation and division of labour has reached such proportions that one can manage with much less. There is expert advice available on any subject and with very little cost. In India, however, the expert is supposed to know and do everything beginning from the

purchase of raw materials, the purchase, erection and working of the machinery right up to the manufacture and sale and auditing of accounts! Otherwise, he *is not an expert!* Such a state of affairs would be unthinkable outside this unfortunate country. It is a herculean task to train youths so fitted in life! Our best efforts should be therefore concentrated in producing as good a substitute as possible for such an article!

The Benares Hindu University has been fortunate in having in *one unit* all the three essentials of applied chemistry. It has got a good laboratory for pure chemistry, a well-equipped laboratory for applied chemistry with an up-to-date collection of apparatus for all operations in chemical Engineering almost equal to that of one of the best laboratories in London, and a first grade engineering college where both mechanical and electrical engineering are taught. Students studying the subject of applied chemistry elsewhere have no such facilities in *one place* and very few can appreciate what a handicap that is for a thorough training. In the matter of its curriculum of studies or admission of students also, the Benares Hindu University has chalked out its own line of work which it would be outside the scope of this survey to discuss. Under the fostering care of its Vice-Chancellor, the University aspires and hopes to solve this problem in an efficient manner.

N. N. Gorbole

PORCELAIN: ITS HISTORY AND MANUFACTURE

The word Porcelain originated from the Italian word "Porcellana" originally applied to rare pieces of artistry in carved shell or mother of pearl. Later the same word was also used by the Italians to distinguish the whitest and brightest of their Majolica wares. In the year 1298 the famous Venetian traveller Marco Polo used this same word, in his account of China, to mention the articles now known as Chinese porcelain. Gradually in later days, as the specimens of Chinese porcelain were introduced more and more in Europe, the term was restricted to denote a certain class of pottery, having a fairly hard white body exhibiting translucency when seen on sharp edges and covered with a transparent glaze which has a peculiar softness when light is reflected on it.

According to Chinese writings porcelain was first made in that country during the Han dynasty, preferably under Wan ti (B.C. 171 to 151) Some European writers are reluctant to give this antiquity to the Chinese on the ground that no authentic specimens are available, at present to establish this claim. This we think is no good argument in face of the theories now being established in India on recent excavations of Harappa and Mahenjo-daro in the Indus valley Who could imagine only ten years back that glass was made in India as early as 4000 3000 B.C.? Yet in the excavations of Harappa in the Punjab has been unearthed a pair of bangles of exceptional excellence and interest which appears to be among the oldest known specimens of glass yet found in India, going back to the times of the Pharaos of Egypt.

Whatever may be the date of origin of porcelain, the Chinese took several centuries to reach the high mark of excellence of their product for which Chinese porcelain is so

famous. It was under the successive kings of Ching dynasty during the 17th and 18th Century that the high water mark was reached and passed. During this period Chinese porcelain was thoroughly familiar in Europe where it was being sent in large quantity as an accompaniment to the exportation of tea, specially after the discovery of the Cape route to India and the establishment of different trading centres in the Far East by different European trading Companies. The excellence of this foreign porcelain and the high esteem with which it was received in the European market stimulated the native potters to improve their own relatively coarse and heavy pottery, and the two letters (1712 and 1722) of Pere d'Entrecolles a Jesuit father, describing in details the manufacture of Chinese porcelain in the Ching-te-Chen districts, contributed to a great extent to enlighten Europe upon Chinese Ceramics.

According to his descriptions the Chinese prepared their porcelain from two substances called Kao-lin and Pe-tun-tse. The former is a white clay substance containing fine particles of shining mica and the material from which this clay could be obtained was generally found on the high ridges of mountains whence the name Kao ling (high ridges) The method of obtaining the clay as practised by the Chinese was as follows:—Lump of the rock was put into a large vessel containing water and the mixture was then thoroughly stirred with a wooden rake. The milky liquid was then passed through a sieve several times, the coarser matter being rejected. The creamy liquid was then strained through silk sacks and the water was removed from the paste by a kind of filter press. The apparatus consisted of a large wooden trough on the bottom of which were placed freshly burnt bricks placed on edge. On them a fine cloth was spread and covered with the clay which was again covered with another cloth, the cloths were tightened and then pressed by several layers of bricks laid flat. When the clay was sufficiently dried in this way it was taken out and made into small blocks for use. The term Kaolin is now-a-days

applied to a definite mineral for which a formula as $Al_2O_3.2SiO_2.2H_2O$. has been given, but this pure substance is always found in nature mixed with other alumino silicates.

The other substance Peton-tse, which literally means "little brick" was made by powdering felspathic and siliceous rocks of divergent composition, in stamp mills actuated usually by streams of water. This powdered rock was washed and dried in the same manner as described for Kaolin and made up into small bricks

These two substance were then mixed in proper proportions and then carefully kneaded with water into plastic mass which was then shaped into different articles either on the potters wheel or in moulds made of burnt clay Large and complicated articles were made in different parts which were afterwards joined together with the clay and dried in the sun. The dried pieces were then glazed and fired in special forms of ovens. If it was desired to decorate the porcelain it was painted on the ware which was fired again for the second time. An analysis of a fragment of a Chinese Vase made during the reign of the Emperor Kank Hsi (1662-1722) is given below:—

Silica	71.82
Alumina	23 04
Phosphoric Acid	0.13
Lime	0.63
Soda	2.12
Potash	1.89
	99.69

The earliest record of Chinese porcelain finding its way to the West was from Cairo in Egypt when the famous Saladin sent a present of forty pieces of this material to the Sultan of Damascus in the year 1171. The Arabs were then the most enterprising traders and a regular trade between the ports of the Red Sea and those on the shores of the Mediter-

rasean Sea specially along the Italian coasts was carried on. Finding the importance of the new merchandise of the Far East, it was natural that the Italian would be the first people in Europe to attempt at the making of porcelain in their own country. From documentary evidences we find that some thing in the nature of translucent pottery was made by the Venetian alchemists as early as the beginning of the sixth century, but the earliest specimen now found in the collection of the Victoria and Albert Museum in London is supposed to have been made at Florence (1575-1585) under the patronage of the great Medici family. The nature of these imitations is quite different from those of Chinese porcelain as these continental people used for their body a mixture of clay and glass evidently with the guiding principle that porcelain could only be an intermediate product between glass on the one hand and opaque pottery on the other

The next step on this line, was taken by the French people and we are told that in 1673, Louis Poterat, a faïence maker of St. Sevre near Rouen succeeded in making porcelains "like those of China" and shortly afterwards we find a similar ware making its appearance at the faïence works of St. Cloud, near Paris.

It would be interesting to note here that the letters patent granted by Louis XIV (1702) to Barbe Coudray, widow of Pierre Chicanneau and their children for the St Cloud factory mention distinctly that the manufactory at Rouen "has at the most only approached the secret (of porcelain), and has never carried it to the points of perfection nor of execution." The protections that were granted to the Rouen manufactory were also extended to this new factory of St Cloud which gradually became famous for its new kind of porcelain. The famous Sevres factory was established in 1756 under the royal patronage of Louis the XV and during the period (1756-1770) this factory became most famous for its artistical glassy porcelains which were

manufactured regardless of all costs with the result that the manufacture of this difficult material was a constant drain upon the Royal Exchequer despite of all its triumphs.

If we examine the nature of the body of this early French soft porcelain it would be quite evident that it is really a glass heated to insufficient temperature to melt it completely but enough to give it a milky transparency. The body was composed according to Bourry by mixing a large proportion of a kind of glass called Frit with a little of clay and chalk.

Body Composition

Frit or molten glass	75
White chalk	17
Calcareous marl	8

Frit Composition.

Sand	60
Salt peter	22
Grey Sea Salt	7.2
Rock Alum	3.6
Alicante Soda	3.6
Montmartre Gypsum	5.6

The glass or frit was broken into small pieces and carefully sorted, only the vitrified parts being used, these were ground and added to the chalk and marl, then ground again with water to an impalpable state. This product was so devoid of any plasticity that soft soap had to be mixed with it to enable the potters to shape it into different forms. This moulding was done by putting a thick layer of the body into a plaster mould which had the outer form of the object and compressing it with a plunger, also of plaster which roughly represented the inside form of the object. The dried piece was then finished by hand and then sent for the first firing which vitrified the body. The glaze was then applied on the fired body either by immersing the object in an emulsion of the glaze composition or by pouring the

liquid on the objects and a second firing at a lower temperature fixed the glaze on the body

The glaze was composed of:—

Litharge	38
Sand	27
Calcined flint	11
Potash	15
Soda	9

During the period 1800 to 1847 this factory was directed by Alexander Brongniart, a man whose great natural parts were polished by his scientific studies and under his influence the manufactory turned into a school of research and a centre of practical accomplishments. Brongniart finding the difficulties of expensive and uncertain soft-paste porcelain and the superior whiteness and durability of the German porcelain made at that time in different parts of Germany, devoted all his energies and scientific mind to find out the composition of "true" porcelain of the "Chinese" type and succeeded in establishing the manufacture of French hard-paste porcelain. The body was composed of white burning kaolin together with other felspathic rocks, the composition corresponding to

Clay substance	66.37
Felspar	15.11
Quartz	12.01
Whiting	6.47
	100.00

A body mixture of this kind needs to be heated to about 1600 °C. to bring out the proper translucency, the characteristic property of porcelains. This body and the glaze on it was exceedingly hard, durable and capable of withstanding rapid changes of temperature but it was the least beautiful and the worst suited to colour decorations.

Brongniart died in 1847 but his influence continued to animate his successors with their scientific pursuit, and we

see that the extremely refractory Kaoline body mentioned above was gradually replaced by the more fusible body composed of

Clay substance	58
Felspar	38
Quartz	24

For the glaze a mixture was made of:—

Burnt fragments of the above body	24
Siliceous sand	43
Chalk	33

The new porcelain of Sèvres could be fired at about 1350°C. and very nearly approached the best Chinese pieces in their tender translucency and in the range of colour decorations of which they were susceptible.

In Germany it were the Alchemists and not the potters who sought for the composition of porcelain and it was in the year 1709 that John Frederic Bottcher, a son of an alchemist, found out a body which was analogous to Chinese porcelain. When the news of this discovery reached Frederic Augustus I, Elector of Saxony, Bottcher was shut up in the fortress of Albrechtsburg near Meissen together with other workmen who were sworn "to keep till the tomb" the secrets they might be able to discover. Bottcher died in 1719 at an early age of thirty five only. In course of time the products of this new fortress manufactory under different able managements became so famous in whole of Europe that inspite of the severe strictness, various workmen managed to escape and with their help new factories were built up at several places in Germany. In 1759 and again in 1761, Frederick the Great, of Prussia, looted the Albrechtburg and temporarily put an end to the manufactory. He had also carried away to Berlin, the models, the working moulds and many of the principal workmen together with the records of works of Boettcher and his successors.

The royal porcelain factory of Berlin owes its origin to John Ernest Gottskowski a banker who set up a manufac-

tory in 1761, and here Frederick the Great sent all the materials as well as the workmen who were brought from the Meissen factory and two years later in 1763 he himself acquired the factory which became a Royal manufactory. This Berlin factory like other Royal manufactories was not a profitable business and we find that many ingenious ways were adopted to push on the sale of this Berlin porcelain. No Jew could procure a wedding certificate unless he had first purchased a service of the Royal porcelain, and the Berlin lotteries had to distribute every year about 50,000 Marks worth of these porcelains. In later stage more attention was paid on the technical and scientific problems of porcelain manufacture so that this Berlin Factory has been of greatest aid to the development of the chemical and electrical industries of Germany by its contribution of chemical and electrical porcelains of high standard.

Dr Hermann A. Seger was appointed as the head of the Chemical-Technical Experimental station at the Royal porcelain factory in the year 1878. He was the man who looked upon the study and the furtherence of the ceramic industry as the work of his life and to him we owe many scientific improvements and inventions which have placed the ceramic industry on its present position. One of the greatest creations of Seger was the soft paste porcelain named after him. This porcelain body was made from the analysis of two Japanese bodies which were given to Seger for investigation. The peculiarity of the body was the strikingly small proportion of clay substance which it contained as compared with other European porcelains. The rational analysis of this body shows the composition:—

Clay substance	25
Quartz	45
Flespar	30

The glaze used on this body was made up from:—

Marble	17.7
Flespar	42.1

Zettlitz Kaolin	13.0
Sand	27.2

This glaze matures between temperatures 1280.°–1300.°C.

In the middle of the 18th Century the English potters were also busy in the search for white materials to make articles similar to that of China. The first successful attempt to make true porcelain in England was that of William Cookworthy when he discovered China clay and China stone in Cornwall about 1755. Although the methods and materials for making glassy porcelain of the French type were known to these people during this period, the native potters never ceased from their independent experiments until at last the Bone porcelain of the present day was evolved in Stock-on-Trent just before the end of the 18th Century. This bone-porcelain offers great advantages to the potters over the other types as the clay paste is much more plastic than the glassy-porcelain mass of the early French type and quite as plastic as the later French type or the German porcelain mass. The articles are first fired to a temperature of about 1250.°C. when they become beautifully white and translucent. The glaze is then applied on this hard fired body in the usual way of dipping and fired again at the comparatively lower temperature of about 1100.°C. This method of first firing at higher temperature and glazing afterwards at lower temperature removes many difficulties that are met with in the supporting and placing large and complicated pieces, also the bone porcelain offers the same range of colour decoration as are possible with the finest glassy porcelain of the 18th Century. Although the mixture used for this body vary in every factory, the average bone porcelain may be represented as made from:—

China clay	35
Bone Ash	40
Cornish Stone	25

An analysis of a Davenport China of the early 18th Century represent the following percentage composition:—

Silica	38.64
Alumina	21.97
Lime	22.38
Phosphoric Acid	13.78
Oxide of Lead	1.02
Soda	1.45
Potash	0.50
	99.75

The different types of porcelain mentioned above belong to one of the following groups although there may be some sub-divisions which are of more or less technical interest

1. *The felspathic or natural porcelains.* This type was first made in China and then in Germany, France and other European countries. The body is very hard and when shattered it exhibits a distinct conchoidal fracture resembling that of a flint pebble

2. *The glassy or artificial porcelains.* This was first made successfully in Italy and France and then copied in other European countries The body is soft and distinctly glassy which easily fritter and the fractures show granular appearance

3 *The phosphatic or imitation porcelains.* This was first invented in England and then carried to other countries. The body contains bone ash and occupies an intermediate position between the other two groups in their hardness and fracture

Thus we find that the porcelain industry had to be nurtured under royal patronages in almost every country before it could stand on its own legs. In India not to say of any patronage, every new venture has to face the keen foreign competition with the result that the infant industry dies out before it could pass the experimental stage, as was the case of the colgong Pottery which was started in 1860, and according to Dr Ball produced articles of high qualities

including table china, porcelain for scientific purposes etc. The porcelain articles made at Calcutta, Mysore and Benares prove that high class wares can be made here entirely with local materials and labour and it is quite natural to expect that more attention should be given to develope this industry on the modern scientific lines.

HIRENDRANATH BOSE

GERM THEORY AND ITS PLACE IN INDIAN MEDICINE

Germs are micro-organisms invisible to the naked eye which belong to the vegetable and animal kingdom and are known generally by the name of bacteria and protozoa respectively. The real knowledge regarding them may be said to have begun long after the invention of the microscope, while their causal relationship with disease was only recently discovered. Bassi, an Italian practitioner, early in the beginning of the last century, while carrying on research in connection with a disease which ruined the silk industry, found out its germ and from analogy came to the conclusion that human diseases also were caused by germs. After this the study of germs received an impetus and the science dealing with them increased with startling rapidity. During the last fifty years it has developed so enormously and attained such an important place in the western medical science that it is almost impossible to ignore the part played by them in the causation of a number of diseases. Some have gone to the other extreme and are of opinion that disease is only possible through the agency of germs and they are hard at work to find them out in case of those diseases for which they have not yet been discovered.

This being in short the history of germ theory it would be interesting to know the achievements of the ancient Indians in this branch of medical science, which occupies such an important place in the medicine of the present day. I propose to discuss in this article whether, and if so how far, the ancient Indians had knowledge about the germs, their relationship with disease and what place the germ theory occupied in the Indian medical science.

The existence of invisible organisms was very well known to the ancient Indians thousands of years before. In

Mahabharat Arjuna[1] in the course of his conversation says 'It is totally impossible to live without killing other lives, for as a rule the stronger live at the expense of the weaker. The world is full of minute organisms and even if one does not intend, hundreds of lives are killed even in the ordinary process of working without one's knowledge, because they are so small that their existence could only be inferred'. These organisms of course belong to the animal and vegetable kingdom, because Indians never make any difference between an animal and a vegetable so far as life[2] is concerned. Vegetables are very properly called dumb animals. *Cakradatta* in his commentary on Caraka says 'Here by the word organic one has to understand both the animal and the vegetable kingdom... *Tantrakara* is of opinion that vegetables are dumb animals[3].

The causal relationship of some of these organisms with number of diseases was also closely observed and noted down. *Caraka*[4], *Susruta*[5], *Vagbhata*[6] and other authors are una-

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[1] नहि प्राणवधे जीवन् लोके किंचिदहिंसकः ।
स्थावरं जङ्गमं चैव हन्ति जीवो हि जीवितम् ॥
तद्यथा यथा प्राणाः प्रियास्तथा च फलेषु च ।
सूक्ष्मं पश्यामि भूतानि तर्कं चाप्यनिशं भारत ।
यत्नवतोऽपि नियतं नैषां स्यात् सर्वतः पर्यग्रं ।

शान्तिपर्व, अ० १५-२०-२२

[2] अत्र तैर्यग्योनेन कृत्स्नदेहनामानि चेतनानि कोद्देशतः ।''' ''तथा च स्थावरेण वानस्पत्यानां सूक्ष्माणां प्राणिनां संग्रहः । चेतनाया जीवितस्य कुतस्य चेतना कृत्स्ना । चक्रदत्त चरक टीका, सूत्र ११४

[3] शोणितं प्राणा तु खलु कुर्वे- स्थावरं सजुजानम् । संस्थानं, ध्वनयो दृष्टाश्च- पादाश्चा सूक्ष्मजातीके भवन्ति दृष्टाः । चरक, विमान स्थान, अध्याय ८।१।

[4] चेतनावत्स्थावरं कृत्स्नाः । किंचिदाश्रयाः ।
कृत्स्नाश्च पतिसर्वा ज्ञाता बोधितसंज्ञाः ॥१५॥
एकाधिष्ठानजान् प्राणोधिकाश्च जलजान्ते ॥१६॥
चेतनादाश्चाश्रयस्थाने ॥१७॥ सुश्रुत, उत्तर स्थान, अध्याय ५४

[5] स्थावराहिविषोपेतान् स्थाना जीतवोऽपाः ।
अपाहृतजलाश्चैव सौक्ष्म्यात् केचित् वर्णाः ॥५१॥
कृष्टे कुर्वेक कर्माणि । सहसा हृदय, विहरण स्थान अध्याय १२

[6] तत्र चतुर्विधो भूतग्रामः स्वेदजाण्डजजरायुजसंज्ञः । सुश्रुत

nimous in declaring that some of the germs are minute like atoms, circular in shape invisible to the naked eye and are responsible for a number of diseases like leprosy. All these micro-organisms have been very significantly referred to as living atoms and invisible to the naked eye. In the opinion of the Ayurvedic Physicians[1] the following diseases are due to the germs. Infectious fevers like small-pox, influenza, consumption, nasal and bronchial catarrh, erysipelas, leprosy, diseases of the skin, hairs, nails and bones, carbuncle and boils, conjunctivitis, blepharitis, etc It is very interesting to know that modern science has clearly shown that nearly all these diseases are due to germs directly or indirectly Spread of infection in these diseases takes place in a variety of ways—ingestion, inhalation and inoculation. These ways were closely observed[2] and described in such way that ordinary men may understand them very easily. Infectious diseases like leprosy, etc., spread from one person to another by co-habitation, repeated bodily contact, inhalation of air, eating and sleeping together and by the use of clothes, garlands and pastes of other persons who are suffering from an infectious disease. *Dalhana*[3] says that infection in the case

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[1] [illegible]

चरक, विमान अ० ७।३१

कुष्ठं ज्वरश्चोपदंशश्चक्षुरोगाश्च तद्विधाः । औपसर्गिकरोगाश्च ॥

सर्वाणि कुष्ठानि कलातपीनि सपिप्पलानि सालिमीलि च भवन्ति ॥

सर्वे संक्रामिणो नेत्र [illegible] विशेषतः । सुश्रुत, निदान अ० ५।३४

अष्टांग हृदय, निदान, अ० ३।४२

[2] [illegible] । सहशय्यासनाच्चापि वस्त्रमाल्यानुलेपनात् ॥ औपसर्गिक रोगाणां संक्रामन्ति नरान्नरम् ॥

सुश्रुत, निदान, अध्याय ५।३३, ३४

[illegible] । सर्वे संक्रामिणः ॥

अष्टांग हृदय निदान अ० १।४४

[3] [illegible] ''[illegible] । [illegible] । तस्मात्तथोक्तं, सुश्रुत सूत्रस्थान अध्याय ६।२०

of bronchial and nasal catarrh spreads through air and enters the human body through nose, while in the case of fever like small-pox it enters through skin. Taking into consideration these modes of infection, *Dharma sutras*[9] have definitely laid down rules not to infect water by throwing urine, faeces, sputum and other toxic substances in it and not to make use of others clothes, etc.

The question here naturally arises 'if the germs are invisible and the microscope was not then known, how was their existence established' The answer is that ancient Indians used to establish the existence of *Atindriya*[10] (Supersensuous) things by *Anumana* or logical inference But they were careful not to base their inference on fanciful ideas but on experience and effects which go to prove their existence. *Arunadatta*[11] in his commentary on Vagbhata says: 'The existence of some of these germs can be indirectly established from the effects which are visible, though the germs themselves can not be directly seen on account of their minuteness'.

The foregoing observations based mostly on material obtainable from Ayurvedic works, give in a nut shell the idea of the Indian physicians regarding the germ theory of disease, and in a befitting way give an answer to a sweeping remark sometimes made in scientific circles that Ayurveda is not a science and that Ayurvedists lack in the mental grip

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[9] नाप्सु मूत्रं पुरीषं वा ष्ठीवनं वा समुत्सृजेत् ।
अन्योन्यवाससि वा कौशेयं वा विगर्हितम् ॥
नखानदीन बालवत् कृत्वा कर्णनखैर्लवेत् ।
उपवीतमलंकारं कृत्वं कटकरोचकम् ॥

मनु अध्याय ४।६६

[10] सामान्यतस्तु दृष्टात्तदन्यथानुपपत्तेः प्रसिद्धिः सुखलाभात् । सांख्यकारिका ६

[11] सौक्ष्म्यात् भूयस्त्वात् कारणात् केचिदर्थतः । यत्प्रत्यक्षानुमानाभ्यां कार्यं वातु जीवति ॥

अरुणदत्त, अष्टांगहृदय टीका, निदान अ० १४।५३

[12] जीवनाशनं अकृत्स्नं हेतोरभावतो न निर्दिशेत् । आज्ञानमस्मृतिः ।१।१३।

and measure required for strictly scientific thinking. There is nothing unscientific in this method of logical inference, on the contrary it shows a sense of propriety and scientific accuracy. Several theories in the western science also are matters of such inference. The western scientist still believes in the germs of small pox, measles, mumps, rabies and others, although the most powerful microscopes and the most up-to-date laboratory technique have failed to reveal their existence. The Ayurvedist similarly believed and rightly believed also in the existence of invisible germs and their causative relationships to a number of diseases. Yet a close study of Ayurvedic works would show that there is a world of difference in looking at the germs as causative factors of diseases. In Ayurveda germs hold a very insignificant position as compared to western medicine. In my opinion there are two reasons. The first and less important of the two is that as microscope was not then known, germs and the science dealing with them was not at all developed and therefore their full significance in the causation of diseases was not brought before the eyes with so much prominence as it is done at the present day. The second and the more important of the two reasons from the Ayurvedic point of view, is that Ayurvedists never think of germs as the only cause of diseases, though they are considered as one among the many external factors. From their point of view, the production of a disease in the human body depends more on the internal derangement than on external agency. Their theory of disease production therefore, depends on a different footing altogether and this explains why germs hold such an insignificant position in the etiology of diseases in Ayurveda.

I shall now discuss how far the Ayurvedic view is correct. An infection is really the product of two forces, invading germ and the invaded subject, each influenced by a number of modifying circumstances and unless the two combine in suitable conditions, like the seed and the soil, the

production of a disease is impossible. *Manu*[21] says "A seed which fell in a field unsuitable for its growth is destroyed and similarly a field without a seed remains barren." Similar is the case with the human body. The western scientist looks at this question from the point of view of seed only, while the Ayurvedist looks at it from the point of view of soil only. For all ordinary purposes, both views appear to be extreme, but if one thinks over the problem rather deeply, he will be convinced that the Ayurvedic view is more practical and rational than the western view. If for example, one intends to keep the quadrangle of his house free from any kind of vegetation, he must try his utmost not to allow any seed from outside to enter into it or to make the ground unsuitable for plant life by tiling and cementing it so that even if seeds enter they cannot take root into it. As seeds of grass are all pervading and come through air and the ground itself is never free from them, every body can very well imagine the impracticability of the first way and the practicability of the other. The same is the case with the germs and the human body. Germs are ubiquitous and are to be found in the air we breathe, in the water we drink, in the soil we live on and on the surface of the bodies of man and animals, it is therefore practically impossible to cut off their connection with our bodies. On the other hand it is much easier and within the reach of everybody to keep the body unsuitable for the growth of germs by observing laws of hygiene as laid down in the *Sutras* and be free from the danger of diseases. Then even if the germs enter into the body they remain there without producing any harmful effect or the a natural death. In a big city like Bombay or Calcutta, tubercle bacilli are present in the atmosphere in numbers and enter the body of every person who stays there but every one does not contract the disease. It is only those whose health is undermined by various reasons or by non observance

[21] अक्षेत्रे बीजमुप्तं हि तन्नैव विनश्यति ।
अबीजकं अपि क्षेत्रं केवलं स्थण्डिलं भवेत् । मनु १०,४१

of the laws of nature and hygiene and therefore suitable for their growth, that fall prey to it. If germs alone were to determine the attack it would be practically impossible for us all to escape from their clutches and human race would be extinct in a very short time. But the factor of the body soil comes there and saves the human race. Sir William Osler rightly says in this connection "Only the natural immunity keeps the race alive".

From what has been said above it would become clear that germs though necessary for the production of a particular disease can not be the only factor to determine the attack. It is the other factor of the soil which determines the production or the non production of a disease. The western scientists who were upto now attributing all important role to the germs are changing their views and have begun to think that germs are not the last word in the production of a disease. Sir William Osler, an authority on western medicine, says 'So widely spread is the seed that the soil, the conditions, suitable for its growth are practically of equal moment.' The Ayurvedist goes a step further and asserts that soil is of more moment than the germs and is the determining factor in the causation of a disease. From the Ayurvedic point of view therefore the principal etiological factors are those which make the body soil suitable for the growth of germs. The human body, as nature has made it, is not a good soil for the germination of germs and if it is kept perfectly healthy by the observance of the laws of nature and hygiene there is practically very little chance of its falling prey to germs. It is certainly impossible to eliminate germs from the world, but it is certainly possible and within the reach of everybody to behave in such a way that even if germs enter they will have no effect.

This being the fundamental difference in looking at the subject, Ayurvedists have given a secondary position to germs and have not spent much of their time and energy in describing and developing the science dealing with them.

They have simply enumerated few simple facts which are of utmost importance from the point of view of preventive and curative medicine. On the other hand, Ayurvedic works contain detailed description of the laws which keep the body healthy. These laws are divided into three main divisions, *Dinacarya*, i.e., hygienic conduct during the day time, *Nisacarya*, i.e., hygienic conduct during the night time, and *Ritu Carya*, i.e., hygienic conduct during the various seasons of the year. It is not the purpose of this paper to enumerate these hygienic rules, they can be ascertained from the original texts. But this paper may perhaps be closed not inappropriately with a quotation from *Caraka*[13] which constitutes the key to healthy life.

'A man who always resorts to wholesome food, exercise, and other activities of the body, who does a thing after full consideration, who is not addicted to passions, who spends a part of his income in charity, who always keeps his temper equable, who always speaks truth, and who serves the elderly people, always enjoys sound health'

B. G. GHANEKAR

[13] यदो हिताहारविहारसेवी समीक्ष्यकारी विषयेष्वसक्तः ।
दाता समः सत्यपरः क्षमावानाप्तोपसेवी चरेद्रजेत् ॥

चरक, शा० २।३५

आहार

आहार का प्रयोजन। २५ वर्ष की अवस्था तक मनुष्य के शरीर की वृद्धि होती है। इसके पश्चात् शरीर की वृद्धि प्रायः समाप्त हो जाती है। शरीर की वृद्धि के साथ साथ और सारे जीवन में शरीर को सतत कार्य करने की आवश्यकता रहती है। हृदय की धड़कन सदा होती रहती है। वायु फेफड़े में प्रवेश करता और इसके साथ-साथ आक्सिजन नामक गैस प्रवेश करती है जिसके बिना मनुष्य का जीवित रहना सम्भव नहीं। मुख और नाक के द्वारा शरीर की दूषित वायु सदा निकलती रहती है। आमाशय में भोजन किये हुए पदार्थ परिपक्व होते और वहाँ से शरीर के प्रत्येक भाग में रक्त का संचालन होता रहता है। इससे शरीर की वृद्धि, क्षति की पूर्ति और कार्य करने में शक्ति प्राप्त होती है। इन सारे कार्यों और शरीर के अवयवों और इन्द्रियों के सञ्चालन से शरीर का बराबर क्षय होता रहता जिससे शरीर के प्रत्येक कोषों के जीर्णोद्धार की आवश्यकता होती है। अतः आहार का सर्वोपरि उद्देश्य शरीर की वृद्धि और जीर्णोद्धार के लिए सामग्री प्रस्तुत करना है। शरीर के सञ्चालन के लिए शक्ति या बल की आवश्यकता होती है। आहार का दूसरा उद्देश्य इस शक्ति या बल की उत्पत्ति के लिए सामग्री प्रस्तुत करना है। ऐसी शक्ति की उत्पत्ति में ताप भी उत्पन्न होता है जो शरीर को आसपास की वायु से अधिक उष्ण रखता है। आहार के और भी उद्देश्य हो सकते हैं पर प्रधानतः उक्त दो ही हैं। इन दोनों का सम्पादन होने पर, जीवन-शक्ति की पूर्ण प्राप्ति है।

शरीर के निर्माण, उसकी वृद्धि, क्षत भागों के जीर्णोद्धार, शरीर में कार्य करने की शक्ति और स्वास्थ्य के लिए चार पदार्थ आवश्यक हैं। वायु, सूर्य-प्रकाश, जल और आहार। इन चारों के साथ व्यायाम और निद्रा भी जोड़ा जा सकता है। इस निबन्ध में केवल आहार पर ही विचार किया जायगा।

मनुष्य के आहार में निम्न पदार्थों का रहना आवश्यक है —

(१) प्रोटीन,

(२) अनिज लवण,

(३) तैल और घी (वसा),

(४) कार्बोहाइड्रेट,

(५) विटामिन।

प्रोटीन। प्रोटीन एक विशेष प्रकार के कार्बनिक पदार्थ हैं। ये सजीव पदार्थों—उद्भिज और जान्तव—में ही बनते और उनसे प्राप्त होते हैं। जीवन के लिए ये अत्यावश्यक हैं। इनमें नाइट्रोजन तत्त्व अधिकतर रहता है जो शरीर के आवश्यक कार्यों के निर्माण में लगता है। शरीर की वृद्धि और कोषों के जीर्णोद्धार में इनकी बड़ी आवश्यकता होती है। शरीर की कार्यशीलता के उत्तेजित करने के अतिरिक्त शरीर की बनावट का यह एक प्रधान साधन है। सारे सजीव पदार्थों, प्राणियों और वनस्पतियों, में जिन्हें हम लोग भोजन करते हैं ये प्रचुर रहते हैं। जो प्रोटीन जीव-जन्तुओं में उपस्थित रहते उन्हें 'प्राणि-प्रोटीन' कहते हैं और जो वनस्पतियों में रहते उन्हें 'उद्भिज प्रोटीन'। ये दोनों प्रोटीन भिन्न भिन्न प्रकार के होते हैं। मनुष्य के शरीर का प्रोटीन इन दोनों प्रोटीनों से विभिन्न होता है। जब हम लोग इन प्रोटीनों का भोजन करते हैं तब वे शरीर में प्रविष्ट होने पर आंतों में विच्छेदित होते और उन कुछ ऐसे रूप में परिवर्तित होते हैं जो शरीर के कोषों के निर्माण में लग जाते और जो ऐसे नहीं व्यय होते वे या तो मल के अथवा मूत्र के रूप में शरीर से बाहर निकल जाते अथवा अन्य पदार्थों के साथ मिलकर शक्ति उत्पन्न करने में व्यय हो जाते हैं। हमारे कुछ भोज्य पदार्थों के प्रोटीन ऐसे रूप में होते हैं जो सरलता और शीघ्रता से शरीर के साथ सम्मिलित हो जाते और कुछ ऐसे नहीं होते। जो प्रोटीन शीघ्रता से हमारे शरीर से मिल जाते वे मनुष्य-शरीर के लिए अधिक उपयुक्त होते और जो उतने न्यून उपयुक्त या अनुपयुक्त होते हैं। यह आवश्यक है कि मनुष्य के शरीर के वृद्धि-काल में पर्याप्त मात्रा में उपयुक्त प्रोटीन प्राप्त हो नहीं तो शरीर की आवश्यक वृद्धि नहीं होती।

दूध, दही, मट्ठा, अंडा, मांस, मछली, हरी पत्तोदार भाजियाँ—बालक, बेबी, लेटुस—और खानेवाले पौधों के नव-पल्लवों में उपयुक्त प्रोटीन विद्यमान रहता है। गेहूँ के आटे, जौ के आटे, सत्तू, बिना छँटा चावल, मटर, सोया, दाल चना, बादाम, अखरोट, गाजर, चुकन्दर और अन्यान्य तरकारियों में कुछ उपयुक्त पर अधिकांश न्यून उपयुक्त प्रोटीन उपस्थित रहते हैं। छँटा चावल सफेद आटे और मक्खन में अनुपयुक्त प्रोटीन रहता है। शक्कर, घी, चरबी और तेल मलाई, मलाई, गरी और चोनिया-बादाम इत्यादि के वानस्पतिक तैलों में प्रोटीन विद्यमान नहीं होता।

मनुष्य के, विशेषतः बच्चों के, आहार में पर्याप्त प्रोटीन रहना चाहिए नहीं तो शरीर की आवश्यक वृद्धि नहीं होती। उनके आहार में प्रचुर मात्रा में दूध और दूध के पदार्थ अण्डे या मांस और हरी पत्तोदार तरकारियाँ होनी चाहिए।

खनिज लवण: शरीर के निर्माण में खनिज लवणों का दूसरा स्थान है। ये चूना, फास्फेट, गन्धक और लवण सदृश पदार्थ हैं। सारे शरीर का २५ वाँ भाग इन खनिज लवणों से बना है। अस्थियों और दाँतों में इनका विशेष अंश है। मांस और मांस के तन्तुओं, रक्त और शरीर के अन्य द्रव-स्रोतों में भी ये प्रस्तुत रहते हैं। ये बड़े आवश्यक पदार्थ हैं। रक्त के तन्तुओं और शरीर के स्रोतों को क्षारीय होने से ये बचाते हैं। यदि रक्त क्षारीय हो जाय तो घातक रोग शरीर को आक्रान्त करते हैं। इनकी उपस्थिति से पेशियों की घटना कार्य करने में सुविधा होती है। यदि इनकी मात्रा सन्तुलित न हो तो पाचक इन्द्रियों का कार्य शिथिल हो जाता और मनुष्य अधिक दिन तक स्वस्थ नहीं रह सकता।। शरीर में प्रायः बीस विभिन्न तत्त्व विद्यमान हैं। इनमें कालसियम पोटाशियम सोडियम लोहा, मैगनीसियम, मैंगनीज, बराद लाह सिलिकन, बेरियम, फास्फरस, गन्धक, क्लोरीन आयोडीन, सिलिकन और फ्लोरीन मुख्य हैं। इनमें पहले ६० तत्त्व क्षार-जनक तत्त्व हैं और शेष ६ अम्ल-जनक तत्त्व हैं। क्षार-जनक तत्त्वों में कालसियम पोटाशियम सोडियम, लौह और मैगनीसियम अधिक महत्त्व के हैं और शरीर में उनका अंश अपेक्षाकृत अधिक है। अम्ल-जनक तत्त्वों में फास्फरस, गन्धक और क्लोरीन प्रधान हैं। सन्तुलित आहार में इन सब तत्त्वों का उचित मात्रा में रहना आवश्यक है। दूध

हो एक ऐसा पदार्थ है जिसमें ये सारे तत्त्व विद्यमान हैं। दूध के अतिरिक्त दूसरा कोई ऐसा एक पदार्थ नहीं है जिसमें ये सकल तत्त्व उपस्थित हों। हरी पत्तीदार तरकारियाँ, कन्द और जड़ों में क्षार-जनक तत्त्व अपेक्षाकृत अधिक हैं और अम्ल-जनक तत्त्व कम। मांस, दाल, बादाम और अन्य दालवाले अन्नों में अम्ल-जनक तत्त्व अधिक होते हैं और क्षार-जनक कम। इन तत्त्वों की प्राप्ति के लिए यह आवश्यक है कि पौधों को हरी पत्तियाँ अधिक खाई जायँ। गेहूँ, चावल, इत्यादि अन्नों के दानों के बाह्य आवरणों में ही खनिज लवण अधिक रहते हैं। इन आच्छादनों के हटा देने से सफेद आटे और छँटे चावल में इनकी मात्रा कम हो जाती है। इन तत्त्वों की न्यूनता से दाँत और हड्डियों की बनावट ठीक ठीक नहीं होती और न फेफड़े, हृदय और वृक्क (kidney) ही अपना कार्य सुचारु रूप से करते हैं।

आहार के खनिज तत्त्वों में कालसियम सबसे अधिक महत्त्व का है। हड्डियों और दाँतों की बनावट में, हृदय के सुचारुरूप से कार्य करने में, शरीर कहीं कट जाय तो रक्त को जमा कर बहाने से बचाने के लिए, भोजन के कुछ अंशों को समुचित रीति से परिपक्व होने के लिए कालसियम की आवश्यकता होती है। कुछ खाद्य पदार्थों में कालसियम होता और कुछ में नहीं होता है। इसकी न्यूनता से शरीर की दुर्बलता, मांसपेशियों की मृदुलता और दाँतों का शीघ्र क्षय होता है। गेहूँ, चावल, मटर, मक्का, आलू, जौ, गाजर, चुकन्दर, शकर, साबूदाना और मांस में पर्याप्त कालसियम नहीं होता। दूध, मट्ठा, अण्डे के पीत भाग, बादाम, दाल और सब प्रकार के फल और हरी पत्तीदार तरकारियों में पर्याप्त कालसियम होता है। यदि इनको भोजन में ये पदार्थ रहें तो पर्याप्त कालसियम प्राप्त होगा। कालसियम की दृष्टि से दूध सबसे अधिक महत्त्व का भोजन है। बच्चों के लिए डेढ़ पाव दूध में प्रतिदिन के लिए पर्याप्त कालसियम उपस्थित रहता है। बच्चों और स्त्रियों के लिए अन्य मनुष्यों से अधिक कालसियम की आवश्यकता होती है।

मांसपेशी और दाँतों में कालसियम फास्फेट के रूप में फ़ास्फ़रस उपस्थित रहता है। शरीर के प्रत्येक कोष में फास्फ़रस रहता है। शरीर की वृद्धि और कोषों के बाहुल्यीकरण के लिए फास्फ़रस अत्यावश्यक

है। रक्त का भी यह एक आवश्यकीय अंश है। दूध, मट्ठा, अंडा, दाल, बादाम, गेहूँ, औ पालक, मूली, ककड़ी, गाजर, कुलथी आदि और सब्जी में फास्फरस पर्याप्त मात्रा में रहता है। फास्फरस और कालसियम के अभाव में दाँतों और अस्थियों की वृद्धि पूर्ण रूप से नहीं होती। अतः हमारे भोजन में कालसियम और फास्फरस पर्याप्त मात्रा में रहना चाहिए। रक्त में लोहा रहता है। रक्त के लाल होने का कारण लोहा ही है। रक्त के द्वारा ही आक्सिजन फेफड़े से शरीर के प्रत्येक भाग में जाता है। रक्त में लोहे का अंश न्यून होने से आक्सिजन पर्याप्त मात्रा में शरीर के प्रत्येक भाग में नहीं जाता जिससे निर्बलता, थकावट, पीलुता इत्यादि के रोग होते हैं। मांस, अंडा, दाल, अनाज के दाने, बादाम, ग्वाल, मूली भाजी, तरबूज ककड़ी, टोमाटो इत्यादि में लोह के अंश विद्यमान हैं। अनेक कार्यों के लिए शरीर में नमक की आवश्यकता होती है। इससे रक्त लसिका संतुलन का रहना, तन्तुओं में जल संचित मात्रा में रहना और शरीर के विभिन्न अंग अपना कार्य समुचित रूप से करते हैं। निरामिष भोजन में नमक की मात्रा अल्प होती है। मांस में नमक पर्याप्त रहता है। अतः मांसाहारियों को अलग से नमक खाने की आवश्यकता नहीं होती पर जो निरामिषभोजी हैं उनके आहार में नमक अवश्य रहना चाहिए। सब खनिज लवण जल में कुछ न कुछ घुलते हैं। अतः तरकारियों को उबालकर उनका जल फेंकना बड़ी भूल है। उस जल को तरकारियों के साथ मिलाकर पकाना और खाना चाहिए। खनिज लवणों के अभाव में दुर्बलता, अस्थियों की वृद्धि की रुकावट, उनकी मृदुलता, मन्दाग्नि (पाचन-शक्ति का ह्रास), पेचिश, रक्त की अम्लता इत्यादि होती है। खनिज लवणों को शरीर के तन्तुओं के साथ पूर्णरूप से सम्मिलित होने के लिए विटामिन की आवश्यकता होती है।

वसा। चरबीवाले पदार्थ शरीर में ताप और शक्ति उत्पन्न करते हैं। प्रोटीन या कार्बोहाइड्रेट से जितना ताप उत्पन्न होता उससे प्रायः दुगुना ताप चरबीवाले पदार्थों से उत्पन्न होता है। भावी भोजन के लिए भी शरीर में चरबी संगृहीत रहती है। यह चमड़े के नीचे एकत्रित होती जहाँ कम्बल के सदृश काम करती जब शरीर के ताप को नष्ट होने

से बनाती है। इससे वसु तुहद होते और शरीर के ढाँचे बनते हैं। वह्निज तैलों और जन्तु-चरबियों दोनों से ही ताप उत्पन्न होता है, पर जन्तु-चरबियाँ शीघ्रता से एक जाती हैं। इसका कारण यह है कि जन्तु-चर वसा में विटामिन होता है जो वह्निज तैलों में बिलकुल नहीं होता। दूध मक्खन और वहुधा घी में विटामिन होता है। अतः इन्हें अवश्य सेवन करना चाहिए। जो मांस-भक्षण करते हों उन्हें अंडा, मांस मछली और मछलियों के तैलों का व्यवहार करना चाहिए। जो मांस न खाते हों और घी, मक्खन और दूध न मिल सकता हो तो उन्हें पालक, मेथी के सदृश हरी पत्तोंवाली तरकारियाँ, टोमाटो, गाजर के सदृश रंगवाली हरी तरकारियाँ खानी चाहिए।

चरबी से शरीर में शक्ति आती और विटामिन की प्राप्ति होती है। अन्तु इससे सुरक्षित होते और शरीर का ताप सुरक्षित रहता है। इससे शरीर के ढाँचे बनते जिससे शारीरिक सौन्दर्य की वृद्धि होती है। यह खाल और आमाशय का चोट से बचाता है। शरीर को कालसियम के सम्मिलित करने में सहायता भी करता है। यदि आहार में पर्याप्त वसा न हो तो हाथ और पैरों में जल के इकट्ठे होने से सूजन होती है जिसे शोथ रोग कहते हैं। शरीर को रात्रों के कीटाणुओं से सुरक्षित रखने में भी बहुत सहायता करती है। शैशवावस्था और बचपन में वसा की अधिक आवश्यकता होती है। पीछे इसकी उतनी अधिक आवश्यकता नहीं होती। आहार में आवश्यकता से अधिक होने से मन्दाग्नि, एवं मलावरोध होता और आलस्य स्थूलता आती है। वसा के समुचित दहन के लिए विटामिन ए और बी और कार्बोहाइड्रेट और आक्सीजन की आवश्यकता होती है।

कार्बोहाइड्रेट। इससे भी शरीर का ताप उत्पन्न होता है। स्टार्च और शर्करा इनके अन्तर्गत आती हैं। स्टार्च चावल, गेहूँ, जौ, मालूदाना इत्यादि से प्राप्त होता है। शर्करा गोली, गुड़ और मधु से प्राप्त होती है। घास में बहुत अल्प कार्बोहाइड्रेट रहता है। दूध में दुग्ध शर्करा के रूप में प्राप्त ५ प्रतिशत तक शर्करा रहती है। अधिकांश स्टार्च और शर्करा वह्निज पदार्थों से प्राप्त होती है। अग्रलिखित पदार्थों में कार्बोहाइड्रेट विद्यमान है। ऊपर से नीचे के वर्गों में इसकी मात्रा क्रमशः न्यून होती जाती है।

(१) श्वेत और धुँधला शक्कर, गुड़ और मधु।

(२) सालूदाना और अरारोट के आटे।

(३) अनाज के दाने: चावल, मक्का, मकुआ, जौ, गेहूँ, बाजरा इत्यादि।

(४) सूखे हुए फल।

(५) चना और अन्य दालों के अनाज।

(६) अखरोट, बादाम, काजू के बीज, मक्खन और तेल।

(७) आलू, लहसुन, मूली, प्याज इत्यादि जुड़वाली तरकारियाँ।

(८) ताजे फल।

(९) हरी पत्तीदार तरकारियाँ।

कार्बोहाइड्रेटों के लिए यह आवश्यक है कि खाद्य पदार्थों का चुनाव ऐसा हो कि न तो उसमें शर्करा और गुड़ सदृश कार्बोहाइड्रेटों का बाहुल्य हो और न वो फलों और तरकारियों के सदृश पदार्थों में कार्बोहाइड्रेटों की इतनी न्यूनता हो कि उनको इतनी अस्वाभिक मात्रा में खाना पड़े कि आमाशय और आँतें उन्हें स्वीकृत करने में असमर्थ हो जाँ। ऐसे पदार्थों का भक्षण भी वर्जित है जिनमें आवश्यकता से अधिक प्रोटीन विद्यमान हो, अतः हमारे भोजन में उपर्युक्त कार्बोहाइड्रेटों में सबसे से थोड़ा थोड़ा रहना चाहिए ताकि सब मिल कर पर्याप्त कार्बोहाइड्रेट, प्रोटीन, खनिज लवण और विटामिन प्रदान कर सकें।

अनाजों का अधिकांश स्टार्च होता है। इनमें थोड़े अंश में प्रोटीन, चरबी और अनिज लवण होते हैं। ताप और शक्ति उत्पन्न करने की दृष्टि से सब ही अनाज प्रायः बराबर हैं। कद्दू में शर्करा का अंश अपेक्षाकृत अधिक रहता है। हमारे भोजन में कार्बोहाइड्रेट सस्ते सस्ते पदार्थ हैं। ताप और शक्ति उत्पन्न करने के अतिरिक्त इनसे प्राटीन और वसा के उपयुक्त उपयोग में भी शरीर को सहायता प्राप्त होती है। हमारे भोजन में कार्बोहाइड्रेटों की मात्रा अधिक होने से इनका बहुत कुछ अंश आँतों में रुक कर सड़ता और इनसे क्षोभ-जनक अम्ल और गैसें बनती हैं जिनसे सड़ी डकार आती, बदहज़मी, दस्त इत्यादि रोग होते हैं।

विटामिन। यह निर्विवाद सिद्ध हो चुका है कि मनुष्य के आहार में विटामिन नामक पदार्थ का रहना अत्यावश्यक है। इसके अभाव में शरीर की वृद्धि रुक जाती, सन्तानोत्पत्ति की शक्ति नष्ट हो जाती, अनेक रोग होते और अन्त में वृद्धावस्था और मृत्यु शीघ्र हो जाती है। अब तक प्रायः ६ प्रकार के विटामिन का निश्चित रूप से पता लगा है। इसके अतिरिक्त और विटामिन की उपस्थिति के विषय में घोषणा हो चुकी है पर निश्चित रूप से अभी उनके विषय में कुछ नहीं कहा जा सकता। इन विटामिनों को विटामिन 'ए', विटामिन 'बी', विटामिन 'सी', विटामिन 'डी', विटामिन 'ई', और विटामिन 'जी' कहते हैं।

विटामिन 'ए'। यह वसा में विलय होता है। इसके अतिरिक्त ईथर, अलकोहल और कुछ कुछ पानी में घुलता है। साधारण पकाने से यह विशेष नष्ट नहीं होता पर यदि पकाना देर तक हो और पकाते समय सामने वायु में खुली रहे तो विटामिन 'ए' बहुत कुछ नष्ट हो जाता है। आहार में यदि इसकी मात्रा आवश्यकता से अधिक हो तो यह भविष्य के लिए संचित रहता है। मनुष्य के शरीर में यह स्वयं उत्पन्न नहीं होता। पौधों की हरी पत्तियों पर सूर्य-प्रकाश के द्वारा यह उत्पन्न होता है।

शरीर की वृद्धि और जीर्णोद्धार के लिए यह विटामिन अत्यावश्यक है। इससे रक्त उपयुक्त दशा में रहता और रक्त सन्तुओं और रसों में जल का सञ्चय नहीं होता। संक्रामक रोगों से सुरक्षित रखने के लिए इसकी विशेष आवश्यकता होती है। इस विटामिन के अभाव में शरीर की वृद्धि रुक जाती, आँखों की सूजन, अन्धापन, रात्रि-अन्धापन, हड्डी फेफड़े की सूजन, क्षयी, आँतों की सूजन—पीनदायी, दस्त—अतीसार, पथरी इत्यादि रोग होते हैं।

काडलिवर तैल, मछली के तैल, अण्डा, मक्खन, घी, दूध, हरी पत्तेदार तरकारियों—पालक, पतगोभी, शलजम पत्तियाँ, चुकन्दर पत्तियाँ, मूली पत्तियाँ इत्यादि—गोभी, गाजर, शकरकन्द, टोमाटो, अंकुरे हुए दानों में हमको विशेष अंश रहता है। काडलिवर तैल से एक कार्बनिक यौगिक निकाला गया है जिसका सूत्र $C_{27}H_{44}(OH)_2$ है। ऐसा समझा जाता है कि यही जैविक विटामिन 'ए' है।

विटामिन 'बी'। यह जल में बड़ी शीघ्रता से घुल जाता है। यह कुछ कुछ अलकोहल में भी घुलता है। यह प्रोटीन के साथ संयुक्त पाया जाता है। गरमी से यह भी शीघ्र नष्ट नहीं होता। क्षारीय विलयन में यह अधिक स्थायी होता है। पकाने से यह भी शीघ्र नष्ट नहीं होता पर टीन में भर कर रखने से बहुत कुछ नष्ट हो जाता है। यदि भोज्य पदार्थ का उबाला हुआ जल फेंक दिया जाय तो इसका बहुत कुछ अंश नष्ट हो जाता है। पौधों में यह मिट्टी और वायु से आता है। अतः साधारणतः यह पौधों के फलों और मूलों में ही अधिक पाया जाता है। हरी पत्तियों में भी यह उपस्थित पाया जाता है।

शरीर के निर्माण और जीर्णोद्धार और स्वास्थ्य की रक्षा के लिए यह आवश्यक है। इसके अभाव में अन्धरोग होगा, अल्प-पुष्टि के लक्षण प्रकट होंगे, आहार के परिपाक होने की क्रिया मन्द पड़ जाती और बेरीबेरी नामक रोग के लक्षण प्रकट होते हैं।

ईख, केला, टोमाटो, पालक, शलजम-पत्तियाँ मूली-पत्तियाँ अनाज के पूरे दाने—गेहूँ, जौ, गन्ना, सेम, मटर, चना, अखरोट और बादाम, गाजर, प्याज, शलजम, दूध इत्यादि में इसकी मात्रा विशेष रहती है। चावल के छिलके से एक कार्बनिक यौगिक प्राप्त हुआ है। जिसका सूत्र $C_8H_{10}ON_2$ है। यही विटामिन 'बी' समझा जाता है।

विटामिन 'सी'। यह रोग से सुरक्षित रखने के लिए अत्यावश्यक है। यह जल और अलकोहल में शीघ्र ही घुल जाता है। पकाने से इसका प्रायः सारा अंश नष्ट हो जाता है। सुखाने और टीन में रखने से भी यह बहुत कुछ नष्ट हो जाता है। जल की उपस्थिति में तो ताप से यह और भी शीघ्र नष्ट हो जाता है। इस विटामिन की प्राप्ति के लिए कच्चे, बिना पकाये हुए फलों और तरकारियों का नित्य सेवन आवश्यक है।

शरीर के रक्त को शुद्ध और समुचित संघटन का रखने के लिए, अन्य विटामिनों को शरीर के निर्माण में, विशेषतः दाँतों और हड्डियों के निर्माण में, सहायता प्रदान के लिए शरीर की आँतों को स्वस्थ दशा में रखने और शरीर को रोग के कीटाणुओं से सुरक्षित

रखने में सहायता के लिए इस विटामिन 'सी' की आवश्यकता होती है।

यह ताजी हरी पत्तियों और ताजे फलों में विशेषरूप से विद्यमान रहता है। अंकुरे हुए अनाजों, मटर, चना इत्यादि में इसकी विशेष मात्रा रहती है। ताजे नींबू, नारंगी, टामाटो और हलके रसीले, कच्चे गाजर, शलजम-पत्तियाँ, कच्चे आलू, नारंगी के छिलकों में यह विशेष मात्रा पाया जाता है।

विटामिन 'डी'। यह वसा में विलेय होता है। यह केवल जान्तव पदार्थों, जैसे मछलियों, घी, अंडा और यकृत्‌ के तैलों में ही पाया जाता है। काडलिवर तैल में इसकी मात्रा विशेष रहती है। वानस्पतिक तैलों में यह नहीं होता पर यदि इन तैलों को छिलके पात्र में सूर्य प्रकाश में रखा जाय तो उनमें यह आ जाता है। मनुष्य के चमड़े पर सूर्य-प्रकाश की किरणों से भी यह उत्पन्न होता है। यदि शरीर में तैल मर्दन कर कुछ समय के लिए सूर्य-प्रकाश में खड़े रहें तो इसकी पर्याप्त मात्रा शरीर में उत्पन्न हो जाती है। ऐसा समझा जाता है कि चमड़े में एर्गोस्टेरोल (ergosterol) नामक एक पदार्थ है जो सूर्य प्रकाश के द्वारा विटामिन 'डी' में परिवर्तित हो जाता है।

इसके अभाव में बच्चों की हड्डियाँ कोमल और टेढ़ी हो जाती हैं। उनके कुब निकल आते हैं। युवा मनुष्यों में हड्डियों के कोमल होने का रोग (osteomalachia) हो जाता है। यह रोग पर्दानशीन स्त्रियों में बहुत अधिक देखा जाता है। इस विटामिन की न्यूनता से बच्चे चड़चड़े, क्रोधी और जिद्दी हो जाते हैं। उन्हें निद्रा कम आती और उनके घुटने और गर्दन टेढ़ी पड़ जाती और हड्डियाँ कोमल हो जाती हैं। ऐसे बच्चे लम्बे खड़े नहीं होते और वे जल्दी चलते-फिरते ही हैं। उन्हें कब्ज हो जाता और पेट निकल आता है। इसकी न्यूनता से दाँत कमजोर नहीं होते पर शीघ्र नष्ट भी हो जाते हैं।

विटामिन 'ई'। यह भी वसा में विलेय होता है। इसके अभाव में सन्तानोत्पत्ति की शक्ति नष्ट हो जाती है। सन्तानोत्पत्ति के लिए यह अत्यावश्यक है। यह पौधों और जन्तुओं में बहुत विस्तृत पाया गया है। सन्तानोत्पत्ति के लिए इसकी अल्पतम मात्रा में आवश्यकता होती है।

साधारण सब भोज्य पदार्थों में यह उपस्थित रहता है। अतः इसकी प्राप्ति के लिए किसी विशेष पदार्थ के खाने की आवश्यकता नहीं।

विटामिन 'सी'। शरीर की वृद्धि और परिपुष्टि के लिए सभी अवस्था में इस विटामिन की आवश्यकता होती है। इसकी न्यूनता से पाचन-शक्ति का ह्रास होता, स्नायु-शिथिलता और बहुधा संक्रामक रोगों से बचने की शक्ति का ह्रास होता, बच्चों की वृद्धि रुक जाती, वृद्धावस्था शीघ्र आ जाती और मनुष्य अल्पायु हो जाते हैं। कुछ डाक्टरों के मतानुसार इसके अभाव से स्कर्वी नामक रोग भी होता है। यह विटामिन दूध में विशेषरूप से विद्यमान है। अन्य खाद्य पदार्थों के सम्बन्ध में अधिक अन्वेषण नहीं हुए हैं पर इस विषय में जो कुछ हुए हैं उनसे पता लगता है कि यह अंकुरित, गोल, हरी और पीली तरकारियों में भी पर्याप्त मात्रा में विद्यमान है। दूध के उबालने से यह नष्ट नहीं होता।

सारांश। ऊपर जो कुछ कहा गया है उससे हम निम्न-लिखित सिद्धान्त पर पहुँचते हैं।

हमारे नित्य के आहार में दूध या दूध के समान का रहना अत्यावश्यक है। यदि दूध पर्याप्त मात्रा में रहे तो अंडा, मांस और मछली खाने की बिलकुल आवश्यकता नहीं। आटा या चावल और दाल या सामान्यतः हमारे आहार में रहता ही है और इसे रहना आवश्यक तो है ही पर सफेद आटा और छँटा हुआ चावल का प्रयोग नहीं करना चाहिए। ऐसे आटे और चावल से बहुत उपयोगी अंश विटामिन और खनिज लवण नष्ट हो जाते हैं। चोकर के साथ आटा और बिना छँटा हुआ चावल सबसे उत्तम है। इसके साथ साथ कुछ ताजे कच्चे बिना पकाये हुए पदार्थों का नित्य सेवन आवश्यक है। नीबू, नारंगी, टोमाटो, मूली, प्याज, गाजर और हर किस्म की इनमें जो प्राप्त हो सकें उन्हें नित्य सेवन करना चाहिए। यदि ये ताजे फल प्राप्त न हों तो अंकुर हुए चने या मटर का सेवन करना चाहिए। इनसे आवश्यक विटामिन प्राप्त होता है। जब हरे चने और मटर प्राप्त हों तो उनका सेवन स्वच्छन्दता से करना चाहिए। पकाये हुए भोजनों में हरी तरकारियाँ अवश्य रहनी चाहिए। पत्तीदार तरकारियाँ गूलवाली तरकारियों से अच्छी हैं। इनमें खनिज लवण और विटामिन

पर्याप्त रहता है। चाकुल, बेथा, पालंगशाक और बैंगन के नवपल्लवों की तरकारियाँ इस दृष्टि से अच्छी हैं। श्वेत तरकारियों की अपेक्षा पीली अथवा हरी तरकारियाँ अच्छी हैं। पकाने के समय इन तरकारियों के उबाल तुए जल को फेंकना नहीं चाहिए बल्कि तरकारियों के साथ मिलाकर पकाकर खाना चाहिए। हमारे आहार में कुछ ताजे सामयिक फल, अंगूर, अनार, नारंगी, सेब, आम, अमरूद, बेर, नारियल, पपीता, खीरा, ककड़ी, तरबूज इत्यादि का रहना स्वास्थ्य की दृष्टि से बहुत अच्छा है। मिठाइयों को यथासम्भव कम सेवन करना चाहिए। खाने पदार्थों में मधु सर्वस्व उत्तम है। टीन में सुरक्षित पदार्थों, विशेषतः फलों के सेवन से विशेष कोई लाभ नहीं होता। जहाँ तक सम्भव हो टीन में सुरक्षित पदार्थों का सेवन नहीं करना चाहिए।

फूलदेवसहाय वर्मा

LONGEVITY AND SENILITY

With particular reference to Plants

The incidence of birth and death is an ever recurrent phenomenon in the world of the living, and one that sharply demarcates the animate from the inanimate objects. The causes which initiate the cycle of life, and as surely bring it to its inevitable close, have exercised the best brains of the thinking men—biologists as well as philosophers—ever since the dawn of human thought, but are little understood yet. The fact, therefore, can only be noted here as the most arresting feature of the living organisms, profound alike in its insistent recurrence as well as in its elusive mystery.

Closely associated with this is the question of age. Organisms come into existence, lead a more or less active life for a time, during which they also reproduce others of their kind, and finally, passing through a period characterised by constantly waning powers, they encounter death and disappear. In those with a sufficiently extended period of existence, there are also, on the analogy of human lives, fairly well demarcated stages of infancy, youth, adulthood and old age, each manifesting its own characteristic features.

For various reasons, mostly utilitarian, men have interested themselves in the question of age and aging, not only in connection with the lives of their fellow men, but also in regard to all the other objects which make up their complex environment. Mostly, however, and for very obvious reasons, it is the common living things, plants and animals, that claimed the immediate attention. Gradually, sometimes out of sheer curiosity, sometimes purposely, their observations came to include in their scope other members too of the animate world. As a result of this study, and due to the innate tendency of the human mind to analyse,

compare and correlate data, certain facts emerged into prominence and some generalisations came to be established.

This comparative study, restricted at first to objects of the same class, gradually became extended to those of different categories, until finally the members of the animal and the vegetable kingdoms, as such, came to be compared and contrasted. This contract and comparison has yielded certain results which are interesting not only because of the data that have been accumulated, but also because of the conclusions that have flowed from them, regarding the fundamental nature of the difference that underlies the plants and animals.

The first thing that became obvious is that not only different organisms have a life of varying length, but that different classes of objects have a certain average age, normally attainable by the individuals, if, that is to say, death from accidental causes is prevented. In general, it also came to be recognised that there is a rough correspondence between bulk and span of life. The smaller kind of animals and plants have only a short spell of existence, while the more bulky ones are longer-lived. Mice, for example, are credited with an average life of 3 years, squirrels 6, dogs 15–20, horses 45 and elephants 50–100. In plants too, some fungi complete their life cycle in a few days, some herbs, like *Stellaria media* and *Senecio vulgaris*, go through their whole life history in a few weeks. There are a number of seasonal garden plants, like the Sun-flower, which require several months for the completion of their life-cycle before they die, while the bigger shrubs and trees continue to live and reproduce for a number of years.

When we, however, go very low down in the scale of life, we encounter extremely ephemeral forms. The extreme is reached in the simplest types of unicellular organisms. In these, the life-span of the individual may not exceed half an hour, sometimes it is even less. Such are, for example,

Bacteria, popularly called the germs, which are responsible for the deadly epidemics like plague, cholera, etc. They are looked upon as the simplest types of organisms. An idea of their simplicity may be gathered from the fact that as many as 50,000 of them would be required in a row to make an inch, and thirty billion would weigh only 1 gram, i.e., 1/30 ounce! In this connection it is interesting to note that Emil Fischer, the renowned authority on these organisms, has determined that a cholera germ by division produces two every half hour or less. Further he has also estimated that at this rate of division the bacteria that would be produced in one single day would number 1,600,000,000,000,000 (one thousand six hundred billion) and would weigh almost half a million pounds! One cannot clearly and easily appreciate the magnitude and significance of this stupendous number, because numbers, when extended beyond the limits to which our minds are accustomed, cease to have any definite meaning. In order therefore to convey an idea of its immensity, it may be stated that *this figure would be about twenty five thousand times the number of seconds since the birth of Christ!* Such a mass of bacteria—*the product of one bacterium in a single day!*—would by its sheer weight and dimensions soon annihilate everything else. It is owing to this power of rapid multiplication that the bacteria are agents of such dreaded significance, and forces almost of infinite extent, because their minute size itself would make them quite harmless. Their unbounded catastrophic activities, are, however, held in check by a very delicately controlled process of auto-regulation in nature, whereby at a certain stage, the bacteria are either killed on account of the exhaustion of food supply, or by an undue accumulation of their own toxic waste products.

Many other simplest forms of life among animals and plants, are characterised by an almost equally short period of existence. In the strict sense, and in the accepted mean-

ing of the word, however, there is no death in these organisms, as no corpse is left behind. After reaching a certain size each individual, under favourable conditions, divides into two. Each of the resulting products behaves similarly, and the process may be indefinitely repeated so long as external conditions remain favourable. In this way Prof. Woodruff has succeeded in maintaining, unimpaired in vigour, the products of 5 races of a single Slipper animalcule (*Paramoecium*) through many years. The experiments which were started in 1907 and were still in progress when last reported in 1921, had resulted in 12,000 generations of the individuals. Experiments carried out on similar lines on other organisms have yielded similar results.

Here then it is merely the individuals that appear and disappear, but barring accidents, the same substance flows on through time without any evident loss, in a stream of growth and fission. In reality, all the living animals and plants form the end links in the chain of life, which, stretching far back through countless generations of extremely varied types, becomes merged in the first speck of living matter, whose origin is lost in the sheer abyss of time.

The simplest forms are thus in a sense immortal. When, however, we come to organisms higher in the scale of evolution, we gradually begin to see distinct evidences of bodily death. These organisms come to consist of a larger number of protoplasmic units or cells, with distinct but co-ordinated functions. Some are concerned exclusively with reproduction. Only these maintain the onward flow of the stream of life. Others are made responsible for nutrition and still others for protection. Under these conditions of restricted liberty and circumscribed existence most of the constituent cells lose their power of division and rejuvenation, and the organisms eventually pay the penalty for their higher differentiation by the loss of their original potential immortality. In fact, they begin to experience senility and death.

As we proceed higher and higher, differences between animals and plants become more and more evident and emphasised. Up to a certain extent the animals are still capable of producing new individuals by a process of "budding," as in *Hydra*, or by the capacity to regenerate lost parts, as in the Earth worm. Budding, however, is soon relinquished as it would be too cumbrous and uneconomical a process. No one can, for instance, imagine an elephant branching out another elephant, or even an earthworm so behaving. This would obviously impose so many restrictions on the activity of the individuals, that they will not be able to survive long, even if for a time they could carry on their normal life functions. The power of regenerating lost parts is, however, still retained by some of them as securing biological advantage. This is illustrated, for example, by the common house lizard which can form a new tail on the old being lost through accident or injury. Soon this power too is lost. In the higher animals, beyond the capacity of healing wounds, no other power of regeneration or repair exists.

It is otherwise with the plants. They are, including the biggest of them, not only capable of healing up wounds, but are also endowed with unrestricted powers of growth and regeneration. In them if an organ is lost, it can be regenerated and replaced. A tree, for instance, cut down to its very base, will regenerate all the lost parts. Production of new individuals by the regeneration of the lost organs, so characteristic of the rose cuttings, is shared by many other plants. Again, although rare, even parts of a dismembered leaf, e.g., of a *Begonia*, and minute fragments of the root of "Cape Lilac" (*Melia azederach*) will readily reproduce the whole plant. This is a most fundamental difference, whose implications will be followed at a later stage, and the underlying cause of the differences, in the regenerating capacities of the members of the two kingdoms, enquired into.

Coming now to the question of life-duration, attention

will be confined here particularly to the higher members of the Plant Kingdom, as these, besides being extremely long lived, exhibit certain other interesting features and peculiarities. The herbs, as has already been said, live from a few weeks to several months. They then fruit, set seed and die. They correspond to proletarians in the human society, whose only business seems but to beget and die. They do not have available to them extra store of reserve food and energy, to enable them to survive the shock of the heavy drain which their reproductive process imposes. They literally die exhausted. Next in order come the plants which live through two years. Their first year is devoted to growth and accumulation of food store. During the ensuing year they produce a big crop of flowers and fruits. This makes such a heavy demand on their energy that they succumb under the strain. To the same category belong the multiannuals, with this difference, that instead of devoting only one year for the preparation of the ensuing crop, they vegetate for a number of years—sometimes as many as 60 or more—in order to lay by enough foodstore, to meet the requirements of the extremely heavy drain which the production of a huge cluster of flowers involves. To this class belong the Talipot Palm (*Corypha*) and the Bamboos.

Lastly we have the perennials represented by most of the trees and shrubs. In their case the duration of life may be much prolonged. They are very tenacious of life. They continue to flower and fruit for many years. Apparently their organisation makes possible the accumulation of enough food material, enabling them to cope with the requirements of the yearly production of fruits and seeds, without thereby succumbing to exhaustion.

Some of the trees are particularly long-lived. Before them the life of the longest-lived animals pales into insignificance. No case of an animal having lived for as much as

300 years is, with any certainty, recorded. Some doubtful cases of fishes and tortoises having attained a longer age have been mentioned. But generally about 160 years is the utmost limit that any animal is known to attain. Now this is, in the plants, the age-limit, as it were, of most of the smaller fries. In the case of some of the bigger forms, this hardly represents their youth, while it may even be the infant stage of some of the 'giants'!

The following account, gathered from various authenticated sources, will give some idea of the extremely long ages which some of the trees can reach. No attempt has been made to give an exhaustive treatment, since this is not possible within the limits prescribed. Only the most notable and well-known cases have, therefore, been cited. This will, however, be supplemented by a somewhat fuller account in a tabular form at the end.

To begin with the comparatively shorter-lived cases, it is to be noted that the Chestnut (*Castanea vulgaris*) reaches an age of from 400-1,000 years. The great Chestnut at Torworth (England) is believed to have been a flowering sapling in the time of Egbert (802-839 A.D.). Some of the specimens are also very bulky. An idea of the dimensions can be gathered from the fact that the famous Chestnut tree of Mount Etna, in Sicily, was found by Jean Houel to be 160 feet in circumference (diameter about 60 feet!). Its stem had, however, become hollow through age.

Next come the Oaks (*Quercus sp.*). The species of this tree generally reach an age of 500-1,000 years. In extreme cases it may even go up higher. The Greendale Oak at Welbeck (England) for example, is believed to have weathered the storms of fifteen centuries. 'About a hundred and sixty years ago' wrote an observer about the year 1900 "this tree was deprived of its heart by the eccentric desire of the then owner to make a tunnel through the trunk. This novel piece of engineering was effected with-

out any apparent injury to the tree. An opening was made through which the Duke of Portland drove a carriage and six horses, and three horsemen could ride abreast. The arch is ten feet three inches high and six feet three inches wide." The Cowthorpe Oak, in Yorkshire, was even reported to be eighteen centuries old. It was seventy-eight feet in circumference at the height of three feet from the ground. Another tree at Mamre, in Palestine, known as Abraham's Oak, is supposed to mark the place where the Patriarch pitched his tent.

The Lime tree (*Tilia*) is another plant which is long-lived (800-1,000 years). The celebrated tree of Neustadt in Wurtemberg (Germany) is nearly 700 years old. While another near Freiburg is believed to be 1,230 years old.

The famous Cedars of Lebanon are reported to reach ages varying from 1,200-1,300 years. The Mexican Cedar or Water Cypress (*Taxodium Mexicanum*) ordinarily touches the limit of 2,000 years. But the famous naturalist Humboldt also estimated that in extreme cases, some specimens may even be 4,100 years old. These trees also become very huge. The diameter may reach a length of more than 55 feet, although the height is not very great. Cypress trees (*Cupressus sempervirens* and *C. fastigiata*) live from 2,000-3,000 years. While the celebrated Baobab tree (*Adansonia digitata*) of Western Africa, reaches an even higher age, viz., 5,150 years. Its girth is over thirty feet. The Wellingtonias or Red wood trees (*Sequoia*) of California are about the same age as *Adansonia* (4,000-5,000 years). Besides, they are also the 'giants' of the vegetable kingdom. They may reach a height of nearly 425 feet in some extreme cases, and a diameter of over 35 feet. The following extracts will be found interesting as giving an idea of their size and age.

"Since they (*Sequoia* trees) have become a centre of the tourist industry in the United States, various methods have

been adopted to make their size more easily realised. Thus a coach with four horses and covered by passengers is (or used to be) driven through a gateway made in one of them. The trunk of another has been cut off some feet from the ground, and a dancing-saloon has been made on the stump. A complete section of one of them was carried across the United States to make a dining-room table for an American millionaire". A vivid idea of the age of one of these named "General Sherman" has been given as follows:—"This tree was about 1,200 years old when Christ was born. At the time of the Trojan Wars and the exodus of Hebrews from Egypt, under the leadership of Moses, the tree was a sapling 20-30 feet high. It has been alive during all the mediaeval and modern history" . . . "and has been peacefully growing in a Californian Valley during all the time when Greece, Rome, Spain, France, Britain and, of course, the United States, developed their civilisations." And again, speaking of another *Sequoia*, Professor J. A. Thomson writes "it was a seedling in 271 B.C., suffered a burn 3 ft. wide when it was 516 years old, and spent 105 years in folding its living tissues over the wound. When it was killed, at the age of 2,171 years, a Methuselah among trees, it was engaged in healing a third great wound 18 feet wide and about 30 feet high."

The famous Dragon tree (*Dracaena Draco*) of Orotava, Teneriffa (Canary islands) was believed to be still older. The age has been variously estimated at between 6000-10,000 years. But by many these are held to be very highly exaggerated estimates. Some biologists even hold that 185-200 years would be the extreme limit. Its circumference in 1868, when it was blown down by a storm, was more than 50 feet.

Of greater interest than any of the above mentioned cases, however, is the record of the Bodhi (*Pipal*) tree (*Ficus religiosa*) growing now at Anuradhapoor (Ceylon). This is a branch of the famous tree under which at Budh-Gaya, Gautama attained his Buddhahood. It was taken by Mahinda,

the son of Asoka, to Ceylon, at the request of King Tissa, and planted by the latter in C. 250 B.C. It is still flourishing and "would almost seem to verify the prophecy pronounced when it was planted, that it would 'flourish and be green for ever'" An account of how the branch was secured and transported, "and the story of its vicissitudes which has been preserved in a series of continuous chronicles, amongst the most authentic that have been handed down by mankind" may be read in J. E. Tennent's exhaustive book on Ceylon. As against the estimated accounts given above the age of the Bo-tree (2,182 years) is a "matter of record" It is also interesting to note that three saplings from this patriarch have recently been brought back to India after the lapse of centuries and planted at Sarnath (Benares) where Lord Buddha preached his first sermon

When one thinks of these ages one begins to wonder what historical secrets may not be concealed in the bosom of these halls with the hoary past

The following comparative table will show at a glance some of the recorded cases of longevity in plants and animals. It includes only a few of the commoner examples. The doubtful cases are indicated by a querry. The plants whose age-limit falls below 100 years have been omitted.

PLANTS			ANIMALS		
	Names	Age in years		Names	Age in years
1.	*Vitis vinifera* (Grape vine)	80-140.	1	Mice	1
2	*Rosa* species (same relative of Bhaiparan).	124.	2	Squirrel	6.
3	*Malus sylv.* (Ivy)	204	3	Rabbit	6-7
4.	*Pyrus malus* (Apple)	208.	4.	Fowl	10-11
5	*Fraxinus excelsior* (Ash)	250.	5	Sheep & Goat	12.
6	*Pyrus communis* (Pear)	340.	6.	Frog	12-16.
7.	*Populus nigra* (Black Poplar)	360.	7	Dog	15-20
8.	*Alnus glutinosa* (Alder)	150-300.	8.	Peacock	20.
9.	*Prunus cerasus* (Wild Cherry)	200-400.	9.	Pigeon	
10.	*Rosa canina* (Dog Rose)	400.	10.	Ass	
11.	*Ulmus* sp. (Elm)	300-600.	11.	Cat	
12	*Juglans regia* (Walnut)	300-400	12.	Lion	20.
13	*Acer pseudoplatanus* (Maple)	400-500.	13.	Leopard	
14.	*Pinus nigra* (Black Pine)	400.	14.	Bear	21
			15	Tiger	

PLANTS			ANIMALS		
	Name	Age in years		Name	Age in years
11	Olea Europea (Olive)	700	16	Ass	27-30
11	Abies alba (Silver Fir)	100-400	17	Ox	34
17	Fagus sylvatica (Beech)	400-500	18	Deer	
18	Castanea vulgaris (Chestnut)	100-1000	19	Dog	18-44
19	Quercus sp. (Oak)	500-(1000*)	20	Camel	40-(100?)
20	Tilia (Lime)	100-1000	21	Horse	45
21	Picea excelsa (Spruce)	100-1200	22	Bear	18
22	Platanus (Plane)	1000	23	Rhinoceros	70-80
23	Cedrus Libani (Cedar)	1200-1300	24	Man	100-111*
24	Taxodium distichum (American Cypress)	1300 (1600?)	25	Elephant	100-111
25	Juniperus excelsa? (Juniper)	2000	26	Goose	100
26	Taxus baccata (Yew)	2000	27	Crow	100-110
27	Cupressus (Cypress)	2000-1000	28	Parrot	100
28	[illegible] (Pagoda)	2000-?	29	Falcon	162
29	Sequoia	4000-1111	30	Pike (fish)	200
30	Adansonia digitata (Baobab)	1000	31	Greenland Whale	300-400
31	Dracaena Draco (Dragon tree)	1000-10,000?	32	Tortoise	400

From the above table it will be seen how heavily the plant kingdom scores over the animal kingdom on this point.

Before proceeding to examine the underlying cause of the observed differences, it appears necessary to give an account of the various methods employed for determining the age of trees. For it is obvious that where centuries are involved, embracing several successions of human generations, the question of correct, or even approximate, determination is fraught with difficulties of an extremely grave nature. The matter is, however, not so baffling as it might appear to the uninitiated. As in the case of the animals, a number of clues, known to the students of plant-life, are available, with the help of which the age of the entire tree, or of its individual branches, can be deciphered, with a very fair approximation, or sometimes even with accuracy.

Firstly, there is the method of comparative growth. In this, growth during a known period of time is measured.

*A lady named Thitee Ahlin, was reported to be 100 years old in 1904, and quite healthy and active. A man, named Zaw Aghe was reported 1 year or two back to be quite strong at 110.

From this the time required for effecting the total growth can be calculated

Secondly, age can also be determined by means of certain land marks generally left behind by plants during their growth and development form year to year These are evoked in response to the rhythm induced in their functional activities by the periodicity of environment. This is particularly expressed in the alternate cessation and resumption of growth, and production of foliage and flowers, which is repeated at regular intervals throughout the whole life. These alternating periods of activity and rest leave their impress in the form of a succession of tracks, which constitute the land-marks referred to above Externally, they are recognisable as a series of scars whose number forms the basis for estimating the age. This is, however, of limited application. It can be only usefully employed in connection with short periods of time. Later the scars are obliterated A more reliable method is afforded by an examination of the internal structure Here a permanent record is left in the stem in the form of, what are called, rings of growth, whose formation is induced by the same rythmic nature of the seasons as already mentioned Their number can easily be counted, and forms the basis of most of the determinations of the age of trees.

Both of the above-mentioned methods, however, yield only approximate results, although the discrepancy involved is negligible.

A more accurate and reliable, though at the same time only occasionally available, basis is afforded by those instances in which trees have been planted in commemoration of certain historical events, as in the case of the Sacred Bodhi tree (*Ficus religiosa*) mentioned above Although rare, these cases are naturally of the utmost significance, since they derive their claim to longevity from the authority of definitely recorded facts, and are useful in checking the claims based on other grounds.

Now as to the reason of the fundamental difference in longevity between animals and plants. This is found to lie in their very different architecture. Trees are constructed on a plan fundamentally different from that underlying the organisation of the highly complex animal bodies. In fact it relates to their respective embryologies. In the higher animals a bony vertebral column appears early in the embryo, and limbs arise with definite number and in definite relation to it. The bodily organisation of such animals is determined and laid down once for all. Growth can take place only during a limited period and to a limited extent. Moreover, the growing points are intercalary, and cannot give rise to new organs to replace those which become old and functionless. It is otherwise with the plants. The higher plants, unlike the higher animals do not reach a stage at which the whole of their substance attains a condition of fixity and permanence. In them there is not only a continued growth in length, but also in thickness. Besides, new organs and tissues, both in the root and the shoot, are being continuously developed. These lead to far-reaching consequences. The plant, in fact, is kept in a state of perpetual youth. As the old organs become senile and functionless, new ones are developed to take their place. There is thus a continuous rejuvenation. Dead and effete parts are either got rid of, or are rendered innocuous. To a large extent the tree consists as a whole of lifeless material. There is thus in the plants a curious commingling of the dead and the living—in fact of a part that may be thousands of years old and dead, and one that may be just coming into existence. This is one of the most remarkable examples in nature of a link between the past and the present.

In this way is maintained the perennial youth of the plants in all its vigour, and there is no limit potentially to a plant's life. And this is easily understood. Whatever may be the physico-chemical reasons, biologically it is the constant wear and tear of the organs, without the corresponding repair, that eventually sounds the death-knell. Plants and

animals are essentially like machines, albeit of a more elaborate type. If the worn-out parts of a machine can be constantly renewed, it can be made to run indefinitely. The plants have found out this secret, the animals have not. To a certain extent, however, an analogy may exist between plants and the coral animals, some of which may have been growing in the days of the Pharaohs. But it is merely an analogy and no more.

Even the plants which do do so not because of any inherent susceptibility to death, but because of exhaustion or accidents. For instance, it has been experimentally demonstrated that if flowering, which ultimately leads to the death of many plants from exhaustion, is artificially prevented, they may be made to live in full vigour without limit. Not so with the animals. However carefully they may be reared and preserved there is nothing, not even rejuvenation methods, that can stay the hand of death, though for ought we know, it may perhaps be delayed for a while.

The question may now be asked and answered: is there any advantage accruing from longevity? Because man cling to life both on account of self complacency as well as for fear of death, it may be natural for them to want to live indefinitely, and the thought of death be both horrifying and sudden. In reality, however, there should be no occasion for sadness or fear. Correctly speaking, as individuals, all are merely trustees of the germ cells, responsible for continuing the race. As such all their activities are merely of the nature of preparations for, or incidental to, the basic act of procreation, and find their consummation in it. Indeed, as has been well said, "throughout the whole gamut of Nature, we find that her chief pre-occupation, her chief incentive to action is the handing on the torch of life." When this is accomplished, biologically there is no further need for the existence of the individual, except for a time for the sake of protection and rearing of the offspring. For race-preservation the ideal method of reproduction would be for each pair of organisms to beget only two offsprings before

they themselves perish. As a rule, however, we find that many more than two are frequently born to each pair. This is obviously to allow for death, before maturity, from accidental causes which claim a large number of the young that are born. It also makes possible the appearance of a larger number of variations for Natural Selection to work upon. In this way the process of evolution is speeded up. Sooner or later, however, the capacity for reproduction is lost. The continued existence of the individual after this stage, becomes then more and more of a hindrance than a help. Socially and historically the old individuals become anachronisms. Biologically they become obstacles, and act as a drag on the process of evolution. For the speeding up of evolution, it is necessary that successive generations be, within certain limits, of short duration, in order to make possible the birth of a larger number of individuals, with new potentialities, in a given period of time. The longer, therefore, an individual lives beyond his most vigorous reproductive period, the more is he preventing the rapid fulfilment of the destiny of creation, whatever that might be. Considered in this light, which, one ventures to think, is the correct way of assessing the true value of life, the various methods of rejuvenation for prolonging life that have come into vogue, or birth-control methods that result in restricting the number of individuals in each generation, and of generations in a given period of time, are harmful in the extreme, in as much as by applying an artificial brake to the wheels of evolutionary progress, the protagonists of these methods are slowing down the pace, and preventing an early fulfilment of the destiny of man. For the moment, the Lord of Creation, as man prides in styling himself, may hypnotise himself into the belief that he is thus contributing to the welfare and happiness of the world. But it should be remembered that he is but a dropler in the surging ocean of the Universe, governed by a certain set of laws, which maintain the thread of life in a delicately poised dynamic equilibrium. These laws cannot be broken with impunity. In the past man's

short-sighted policy has brought about disasters which cannot be retrieved, and which are already leading to wreck and ruin of a far-reaching character and magnitude To mention only one out of a host of such examples, his unrestricted destruction of plant-life loosens a relay of catastrophic forces which have wiped out from the surface of the globe many, once prosperous, smiling, and powerful civilisations, in the past, and turned the sites into howling deserts. His interference is thus bound to have fatal reactions on the whole texture of the world And though the seed of destruction which he now sows may not bear fruit for generations, aye for centuries, yet in this very insidious nature of the changes lies the gravest danger. For the accumulated effects, after a long lapse of time, may be all the more uncheckable. It has been well said that "the mills of God grind slowly, but they grind very fine indeed" "If the natural processes are strolling by a tiny and temporary interference of man can be disastrous, how can imagination grasp the total effect of man's influence, impressed upon the world of Nature, often with great power and persisted in, not for a few years, nor for a few centuries, but for thousands, nay, even for tens of thousands of years."

The practical moral of this, and every other story of inter-relations, is that man should be very careful in his interference with the system to which he belongs. It would thus appear that the best fulfilment of the life of the individual is its termination soon after the main purpose of life is over, in order to make room for the new generation of individuals, with lives fuller of promise and more radiant with energy. It is only thus that the individuals can best fulfill the purpose which ushered them into existence.

N K. TIWARY

THE BASIS OF AGEING, REJUVENATION AND DEATH

Being an Experimental Study into the Physiology and Chemistry of Plant Material

"I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smaller pebble or a prettier shell than ordinary, while the great ocean of truth lay all undiscovered before me."

—*Newton*

I—INTRODUCTION

In choosing the subject for the present paper for inclusion in this commemoration volume, it was felt that probably no better occasion could be found for presenting a summary of the hitherto unpublished work of the author, extending over a period of nine years at this University, in the field of Senescence, Rejuvenescence and Death than the present one when it is our special privilege to commemorate the 70th birthday of one of the world's greatest pioneers in the cause of education, who even at this advanced age belies all theories of senescence by presenting his living example of unabated energy and enthusiasm. It is this aspect of the life activity of the personage which tempts me to throw some light on the interesting subject of ageing, rejuvenescence and death in the living organism, particularly in the plant.

My theme presented below is drawn from facts relating to the organism, its development, its period of marked activity and lag during growth, and the factors determining its span in life.

Presumably no subject connected with the living organism has evoked such widespread and deep-seated interest as that of the duration of life and succession of generation

and what was expressed as applicable to natural phenomena in the above quotation of Newton still holds good in the realm of biology, unprecedented progress notwithstanding. So little is known about the underlying principles of the functioning of the organism! This is a matter for hope rather than despair, as slow and difficult acquisition of knowledge on surer footing always leads to wider prospects of success.

In order that the following exposition be easily followed I state at the very outset the main *hypothesis* I am putting forward in this paper on the subject of ageing, rejuvenation and death in plants.

To me it appears that 'senescence' or the act of getting old is a characteristic and necessary feature of life, and 'death' the inevitable end when 'rejuvenation' or increased life-activity fails to intervene. The basis of both ageing and rejuvenation appears to me to be, to a large extent, the accumulation and sudden removal of harmful metabolites following the 'Law of Mass Action'—the immediate change in the activity of the organism being brought about as a result of a disturbance in the respiratory mechanism of the organism. I incline to the view that the process of senescence, rejuvenescence and death can be followed in somewhat similar manner that we follow the progress of a chemical reaction; and in order that senescence and death be delayed or finally overcome, the resistance to the reaction velocity within the organism must of necessity be diminished by the removal of the toxic metabolites from the centre of activity and thus the respiratory mechanism saved from final failure.

But before I proceed with the analysis of the evidence leading to the formulation of the above hypothesis it is necessary to preface it with remarks relative to our conception of the organism as a whole and the nature of the life-unit.

II—THE ORGANISM AS A WHOLE AND THE NATURE OF LIFE UNIT

Leaving aside the simplest and the lowliest organisms which form unitary bodies, the organism, as we understand it today, may be visualised at the sum total of a number of functioning units, each complete in itself and bearing the full characteristics of 'life', yet possessing organic interconnections for transport of materials from one end of the organism to another, thus giving evidence of the corporate life of the units to definite ends.

In its ultimate architecture each unit is impregnated with the colloidal complex of the protoplasm with several organic and inorganic reactants dispersed in a solid or liquid phase in a manner calculated to yield definite reactions in response to diverse stresses of conditioning factors

The diversity of this constitution both in consistency and variation is so immense as to evade definite or detailed consideration in time and space. Nevertheless, without invoking the aid of *vitalistic* conceptions of life, it should be within our power to study the nature and significance of the reaction occurring in the composite organism with respect to external and internal factors.

As a result of the many-sided and painstaking investigations of animal and plant physiologists among whom may be mentioned Loeb [24, 25, 26] & [28], Warburg [27], Meyerholf [31], Robertson [29] & [30], Osterhout [30], Blackman[2], Hill [10] & [11], and Hopkins [13], it has been possible to recognise and divide into groups the chemical physiological reactivities occurring within the heterogeneous media of the cell and to place our knowledge on a sounder footing A further insight into the nature of chemical reactions as obtain *in vivo*, particularly the extreme plasticity of the sugar and the amino-acid molecules and the chained character of the reactions, may be gained by a study of the epoch-making discoveries of Emil Fischer,

Aberhalden, Kossel, Nöf and Mathews* in the realm of chemistry But while the part of the chemist becomes easier by paying attention to the independent reactions of comparatively stable nature, the work of the physiologist becomes more difficult as he has to deal with a relatively unstable medley of interrelated reactions in heterogeneous media inside the cell centre. The difficulties in the path of the latter become added up when he has to deal not only with one centre of activity but with that totality of multi-cell laboratory which constitutes the multicellular organism and where the final expression of the results is judged by the so-called 'function' of the organism.

F F. Blackman[3] while presiding over Section K of the British Association for the Advancement of Science clearly recognised four fundamental facts governing the rate of chemical-physiological reactivity within the living cell, viz:—

(i) the nature of the reaction in question,
(ii) the amount of the reacting substances,
(iii) the temperature of the reacting media, and
(iv) the influence of catalysts upon the reaction.

Thus by unifying chemical reaction in the test tube with that in the living organism Blackman made rapid strides in the latter possible

As a result of the work of the author[48 & 54] of this paper in the same direction, it has been shown that the phenomena of respiration and assimilation of plants obey Vant Hoff's rule within certain limits of temperature The applicability of Blackman's[3] idea of *Optima and Limiting Factors* has been tested with reference to many physiological reactions and the principles of chemical mechanics have been found equally applicable to physiological reactions. In this analysis answers to questions like the following have been sought What is the nature of the chemical equilibrium in physiolo

*The papers contributed by these authors are so numerous and the field traversed so wide that it will not be possible to refer to the original work within this small space.

gical processes? Are the principles underlying the *Law of Mass Action* applicable to plant and animal processes of life in all their implications? Is it possible to control the rates of physiological activities by control of external factors? How far can the increased rate of activity be sustained and so forth?

Even an elementary student of biology is acquainted with the wide range in the life duration of organisms. Life may exist in different forms and degrees from the tiniest periods of a few minutes to several hundred years in the case of plants. This forces two considerations (1) What is the cause of *natural* death as we understand it in the sense of individual bodily deterioration? (2) Why should there be any variation in the life duration of organisms? Is it a predetermined factor in life or does it arise from the environment?

It is well known that the organism exists in the form of individuals of various kinds and dimensions and that it often starts with a fraction of the size which it finally attains at maturity. Making use of various unorganised materials as food, it accomplishes a series of chemical, physical, and physiological transformations within itself, the net result of which is growth and differentiation. Subsequent to its reaching a size limit, characteristic of that class of organisms, the individual gives rise to one or more organisms like the parent and repeats the cycle of growth, development, and reproduction.

These changes when continued bring about a gradual deterioration in the organism, such that the loss incurred by continued reproduction and multiplication, is not made good by the process of *growth* and *repair*, and the organism shows symptoms of increasing senescence. Senescence in its extreme form expresses itself in absolute cessation of life activities or what is popularly known as 'death'.

It must be borne in mind however, that the culmination of senescence or death is a phenomenon overtaking the somatic

or vegetative portions of the organic individual from which the reproductive portion in a sense escapes. For, before the individual body perishes certain of its reproductive cells have united with certain reproductive cells of the opposite sex in the same individual or in another individual, thereby ushering into existence with such such fusion a young cell which is the physical basis of a new organism exhibiting clearly continuity of life in another body. In this sense rejuvenescence is as normal a feature of the organic life-cycle in higher animals and plants at least, as senescence. This fact raises a number of questions: Is rejuvenation something which takes place during the course of sexual reproduction, or is rejuvenation another name for what may be everlasting youth of the germ plasm of the sex cells? Is any kind of rejuvenation possible in asexually reproduced organisms or is it constantly associated with the sexual mode of reproduction? Does rejuvenescence occur in all organisms or in certain of them only? Is a rejuvenation of the whole organism possible or only of certain portions of it? What are the factors governing senescence and rejuvenescence in plants? Is the organic world of plants and animals as a whole moving towards extinction due to senescence or is the balance evenly maintained by a parallel process of cosmic rejuvenation? And finally is it possible to eschew or at any rate control senescence?

To Bailsford Robertson[20, 21, 22, 23], Charles Manning Child[5], Minot[24], Loeb[25, 26, 27], Pearl[28] and Metchnikoff[29] whose works on the subject continue to enjoy the reputation of standard references, we owe our knowledge of senescence, rejuvenescence and death in animals. But so far as I am aware no systematic researches on the subject with reference to the plant exist. It has been my endeavour to investigate the subject in the plant with reference to its general metabolism. Before however we could profitably pursue our enquiry into the phenomena of duration of life it would be necessary to gain sufficient insight into the fundamental process of growth itself.

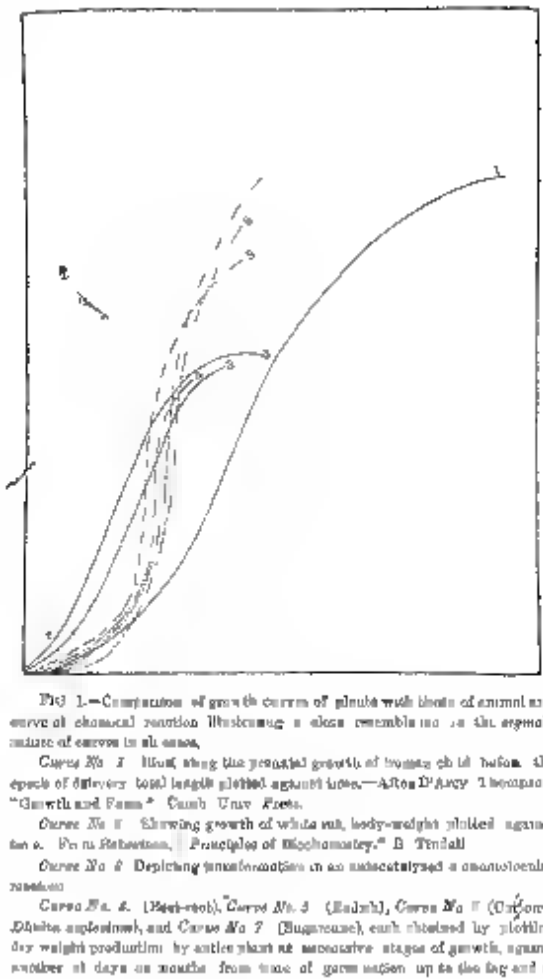

FIG. 1.—Comparison of growth curves of plants with those of animal and curve of chemical reaction illustrating a close resemblance in the sigmoid nature of curves in all cases.

Curve No. 1. Illustrating the periodical growth of human child before the epoch of delivery (total length plotted against time.—After D'Arcy Thompson, "Growth and Form." Camb. Univ. Press.

Curve No. 2. Showing growth of white rat, body-weight plotted against time.—From Robertson, "Principles of Biochemistry." B. Tindall.

Curve No. 4. Depicting transformation in an autocatalysed enzymolysis reaction.

Curve No. 5. (Pearl-Reed), *Curve No. 6* (Eadith), *Curve No. 7* (Oryzon—Dhaka sativum), and *Curve No. 7* (Sugarcane), each obtained by plotting dry weight production by entire plant at successive stages of growth, against number of days or months from time of germination up to the lag and of growth when plants dry up.

III—THE NATURE OF GROWTH AND GROWTH CURVES*

On plotting growth magnitudes in terms of dry weights at successive stages of the life history of the plants experimented upon (*See* Fig. 1) raised in several series in the field at different times of the year, the *time-growth-curves* in each series are of the usual *sigmoid* type as obtained by Bradford Robertson[44] in the case of man and white rat. It is apparent from this that there is an essential similarity between the growth curves of these plants and the curves for the *autocatalytic reaction* in the realm of the non-living on the one hand, and the growth curves of animals on the other hand. An examination of the curves would further show that the organism or the autocatalytic reaction initially exhibit greatest rapidity of growth or march of reaction as is evidenced by the steepness of the early portion of the curves in both cases and that later the rounding off of the curves is expressive of a marked decline in the growth of the plant or the march of the autocatalytic reaction. The plant ultimately dries up and ceases all indications of life.

The *relative-growth-rates* [illegible], when plotted against time (*See* Fig. 2) show a similar initial increase, leading sooner or later, according to the duration of the vegetative period, to a maximum which is followed by a steep fall about the flowering period, eventually reaching the zero line. This is remarkable, for at the start, the cells are young and very little differentiated whereas with the progress of the life-cycle they become increasingly differentiated and would therefore be expected to show progressive growth-rate. About the time of the initiation of the reproductive phase there is a maximum increase in the relative-growth-rate soon followed by a decrease which succession is thought to be of profound physiological significance since all the external factors are kept above the limiting value. The infin-

*Cf. in this connection the works of Blackman, V. H., Kidd, West, Briggs, Gregory, Fenhall, Brouzhby and others on plant growth cited at the end corresponding to Nos. 4, 5, 7, 8, 13, 39.

tion of the phenomenon therefore has to be sought in some internal factor.

The search for this internal factor raises a number of questions. Is this '*maximal outburst*' of growth just before the commencement of flowering, of general occurrence in all the species and varieties of plants and animals? If the attainment of this maximal growth-rate has anything to do with the production of reproductive organs, why should there be a subsequent decline? Has the decline anything to do with the possible limitation of the active nutritional mass inside the plasma? Are the *ontogenetic drifts* in the relative growth-rate due to the decrease in growth capacity with increasing bulk of differentiating cells? Or does the growth machinery break down because of a prolonged disturbance in the balance kept up by the metabolic substrate, which would bring about a fall in the respiratory activity and hence in the energy supply

On further analysis, the time-growth-curves for Cotton[14] conform to a variation of the exponential type of equation of the form, $Log\ W = n\ Log\ t + a$, where w=dry weight, t= days after germination, and a and n constants. Hence when $Log\ W$ is plotted against time a straight line is produced. The slope of this straight line is made a measure of the march of growth towards senescence in each series of sowings. In spite of seasonal variations the gradient of the march of growth remains identical in all the series, though growth variations in the different series are noticeable in the shape of variations in the final dry weights in corresponding periods of the age-cycle, in the number of times the reproductive primordia appear, in the number of 'maximal humps' in the relative-growth-rate, in the period of approach of senility and the final cessation of growth. Since no differences are perceptible in the form of growth curves of the different seasons, the conclusion is obvious, that the growth variability described above is the product of the environmental effects at the time of sowing and at the earliest seedling stage, and

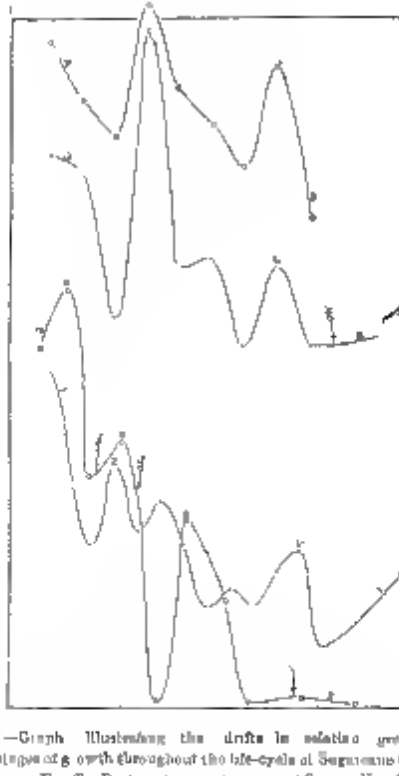

FIG. II.—Graph illustrating the drifts in relative growth-rate at successive stages of growth throughout the life-cycle of Sugarcane (*Curve No. 1*), Cotton (*Curve No. 2*), Beet-root, country var. (*Curve No. 3*), Beet-root, imported var. (*Curve No. 4*).

The seasonal humps (the maximum growth) and minimum decline seem to be characteristic features of growth-rate curves of all the plants, the production of reproductive organs (shown by arrow marks in Curves Nos. 2 and 3) being generally preceded by the 'seasonal humps'.

In the case of the imported var. of Beet-root sown side by side with the country var. of Beet-root and in the Sugarcane, however, no such relation of the reproductive organs takes place in spite of the appearance of 'seasonal humps' referred to above.

have nothing to do with the environmental complex in which the plant is reared throughout its life cycle. There is thus a possibility of 'out of season' growth proving fairly successful if the proper environment at the germination stage is arranged. The cause for later growth drifts and the initiation of the reproductive phase must therefore be sought in the *nature* of the early *growth potential* as it obtains at the germination stage in response to the conditioning factors.

The 'maximal humps' (*See* Fig. 2) observed previous to the appearance of reproductive primordia, either once in the life-cycle or several times, according to the number of times reproductive buds are initiated in keeping with the duration of life of the plant, seem to be associated with a physiological retardation of the growth activity with each initiation of the reproductive phase, and a diversion of the plastic material to the reproductive region [illegible].

In fig. 3 are reproduced the *relative growth-rate* for the entire plant (Radish) [illegible], the *assimilatory index*, and the *respiratory-index* of the entire plant observed at successive stages of the growth cycle of the plant reared under field conditions. From a full consideration of the experimental results it would be observed that growth is the net result of diverse metabolic activities within the colloidal complex of the protoplasm, and indeed sums up the whole of the inter-related medley of complex processes of its chemistry of which assimilation on the one hand, and respiration on the other, are the two most prominent. As a direct evidence of this we may note in fig. 4 a close parallelism between the respiratory indices of the entire plant and the growth-rate curves of not only Radish but all the varieties and species experimented upon (curves for the rest not reproduced), thus a measure of the respiratory activity at successive stages of the growth-cycle would give a close estimate of growth activity itself.

In the case of the Radish plant it may further be noted that the assimilatory-indices of the leaves also show a general

decline with age corresponding with both the growth rate and the respiratory-index curves. This would lead to the inference that the magnitude of growth is strictly determined by the two *metabolic cardinals*, viz., respiration on the one hand, and assimilation on the other; and further that the internal factor for growth, respiration and assimilation appears to be common.

As examples of physiological ratios exhibiting similarity with growth-rate we may note the leaf area and the leaf-weight ratios, the former showing a greater correspondence than the latter [43]. In short, the rate of the dynamic process of growth and for the matter of that, the rates of the other metabolic processes are shown to be characterised in all the cases by a general fall with advancing age, intervened by 'maximal humps' referred to above.

The data of chemical analyses of the Radish plant [44 & 45] (Fig. 3) show that the monosaccharides abound during active metabolism and are condensed to di-and poly-saccharides during the quiescent period of growth and respiration, and follow very closely the growth-rate and indices of respiration and assimilation curves. It has been shown elsewhere [41 & 42] that monosaccharides are the best respirable sugars and a variation in the same corresponds with a variation in the intensity of respiration in different seasons of the year and at different stages of growth. Apparently the relative increase of the monosaccharides—both rate wise when the intensity of respiration is greatest and growth-rate too is at its maximum—seems to point out that both the processes are connected with this internal factor.

The correlated run of many physiological activities as stated above leads unmistakably to the conclusion that there is a connected sequence of metabolic events of the protoplasm during growth. This two questions, why the organism shows a general fall in the growth rate and other metabolic activities with advancing age and a rise before each appearance of reproductive primordia are of fundamental importance.

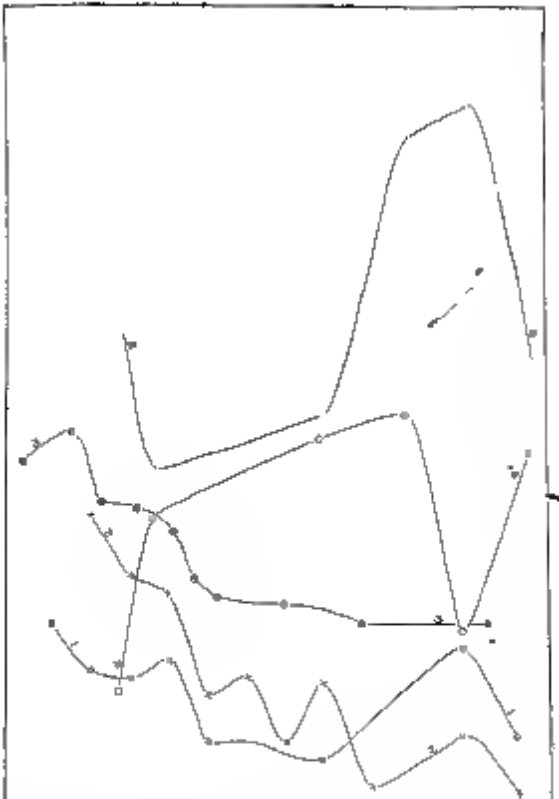

FIG III —Graph giving the march of respiratory index (*Curve No 1*), relative growth-rate (*Curve No. 2*), acidimetric index (*Curve No 3*), monosaccharides (*Curve No 4*) and polysaccharides (*Curve No. 5*).

The parallel march of the curves for relative growth rate, respiratory index, acidimetric index, the preponderance of monosaccharides at the hour when growth-rate is maximal and a corresponding decline in the value of polysaccharides, indicate a genetic relationship amongst the first four, and the probable existence of a common internal factor for all the four.

and require elucidation. It appears that with the advance in age the proportion of non-living elements inside and outside the protoplasm increases enormously at an unknown rate, and what we express as metabolic drifts or growth drifts of the plant is the expression of the activity of the living protoplasm and not of the dead tissues, which thus greatly vitiate the calculations of physiological rates and give their uniform picture.

In an attempt to reach a more realistic conception of the intrinsic growth potentiality, experiments were designed to measure the *ontogenetic drifts in the respiratory-index* (at 10°C at atmospheric O_2 conc.), *the state of hydration* of the *meristematic or undifferentiated tissues* of plants of different habitats and life durations[11]. Comparative data have also been obtained for the relative-growth-rate and respiration for the entire plant to give the 'correlation-coefficients' of growth.

On the basis of the results the whole population of plants studied may be segregated into representatives of two physiologically distinct groups (A) **Short-lived annuals**, viz., (*i*) *Pinum sativum*, (*ii*) *Coriandrum sativum*, (*iii*) *Carum copticum*, (*iv*) *Foeniculum vulgare*, (*v*) *Trigonella Foenum graecum*, (*vi*) *Hibiscus esculentus*, (*vii*) *Cicer arietinum*, (*viii*) *Raphanus sativus*, (*ix*) *Sinapis* (Mustard), and (B) **Long-lived annuals**, viz., (*i*) *Dhaincha neglectum* (Cotton Plant), (*ii* and *iii*) two spp. of Beans.

The two classes of plants segregated show a fundamental difference in the respiratory indices of the meristematic tissues. In the short-lived plants there is a gradual decrease in the values from the earliest stages of growth and the rate of decline becomes more pronounced before the initiation of reproductive organs while in the long-lived species, the values of respiration maintain more or less a level phase for a considerably long time after germination without any notable fall, at a time when the growth-rate and respiration of the whole plant are steadily falling, and show a decline only towards the fag end of growth when the reproductive phase

intervenes. The difference in the values of the two groups of plants is remarkably correlated with a like difference in the state of hydration in these tissues.

Taking respiratory-index as the measure of the general metabolic activity of the protoplasm, the following generalisations can be made:—

1. *A decline in the katabolism and multiplication of the cells in the growing region will tend to approximate the gradient of the hydration of protoplasm.*

2. *The potential longevity of any plant is determined by the relative velocities of anabolic and katabolic activities and the hydration state of the protoplasm in the growing region, and*

3. *The state of hydration, in the growing region appears to be governing both respiration and growth.*

Is it not possible to control the reaction velocity within the cell from the early seedling stage in order that the *desired* results be obtained? Could we not invoke new vital characters to answer to our needs?

With a view to putting these generalisations to more critical tests the intrinsic potentiality of the protoplasm for growth was measured by observing the rate of regeneration or *healing of mechanical wounds in Hibiscus tiliaceus*[49] at successive stages of its life-cycle. *It is noticed that the relative-rates of respiration, power of callus formation in the wounded area (regeneration), hydration of protoplasm in the tissue show a striking parallelism which has been attributed by the author to a qualitative change in the protoplasm, or in other words, to a 'metabolic senescence' of the protoplasm.*

If then a qualitative change in the protoplasm determines senescence let us endeavour to trace the nature of that change. A study of the *'carbohydrate-nitrogen flux'* in both reproductive and vegetative parts of the organism (*Artocarpus integrifolia*)[50] * * in relation to growth and respiration in varying seasons, *gives a basis for the establishment of the view that the nature of the food product in the*

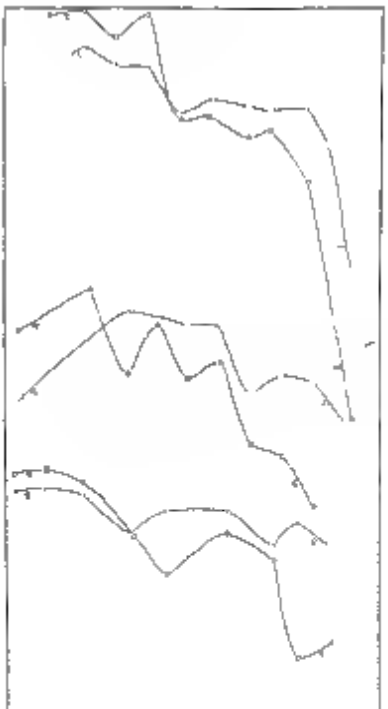

FIG. IV—Comparison of relative growth-rate curves (*Curves Nos. 1, 4 and 6*) and respiratory index curves (*Curves Nos. 2, 5 and 3*) during successive stages of growth throughout the age. Oats of Mustard (*Curves Nos. 1 and 2*) Radish (*Curves Nos. 3 and 4*) and Cotton (*Gossypium hirsutum var.* (*Curves Nos. 5 and 6*).

In each case the match of respiratory index shows a close parallelism with growth-rate drifts throughout the ontogeny of the plants, thus permitting an estimation of growth activity in terms of respiratory index at successive stages of growth.

vegetative organ in relation to protoplasmic hydration is greatly responsible for the appearance and later development of the reproductive organs. The chemistry of the vegetative and reproductive growth appears to be interdependent. The reproductive organs may be said to have four distinct chemico-physiological phases in their existence, viz., (1) the *preconjugation* and the *immediate post-conjugation* stage which may be designated the *young stage*, (2) the stage in which the major portion of the growth is accomplished or the '*adolescent*' stage, (3) the stage of partial ripeness or the '*penultimate senescent*' stage, and (4) the stage of full ripeness or the '*senescent*' phase. From the analytical study of the various carbohydrates and amino-acids in all the stages it is found that the young stage has a high C/N ratio in both the vegetative and reproductive organs, the adolescent stage shows a continuation of the same proportionality, the penultimate senescent stage shows a high C/N and a low Amino-/Mono-ratio in the leaves, and opposed to this a low C/N and a low Amino /Mono-ratio in the fruits.

The following conclusions are the outcome of the above analytical study.

1. *A low C/N ratio, a low Mono-/Amino-ratio, and a higher sugar content are characteristic of greater growth of reproductive organs.*

2. *A medium C/N ratio, a medium Mono-/Amino-ratio and medium sugar concentration accompany moderate growth of vegetative and reproductive parts.*

3. *A high C/N ratio, a high Mono-/Amino-ratio, a high soluble sugar concentration and a low water content mark the senescence of the vegetative portion and the ripening of the fruits.*

The results furthermore suggest the existence of a balance between carbohydrate and protein katabolism in the adolescent vegetable organism and it is highly probable that the nature of this balance determines the alternation of the vegetative and reproductive phases.

IV—THE BASIS OF SENESCENCE AND DEATH IN PLANTS

From a consideration of the foregoing facts senescence has been found to be a characteristic and necessary feature of life, and 'death' the inevitable end of this process when regression or rejuvenation does not occur due to certain adverse conditions affecting the colloidal matrix of the living cell. *Senescence and death on the one hand, and rejuvenation on the other, appear to be simply two aspects of the same dynamic activity.*

Nature of Retarding Influences in Growth-rate

From the discussion of the experimental data little doubt can be entertained that among other factors the general decline in the metabolic activity, lowering in the hydration of the protoplasm, high C/N and Mono-/Amino-ratios, a gradual drift in the cell-sap and water-content towards the initiation and development of the reproductive organs, the inactivation of catalysts inducing a fall in the rate of hydrolysis, the decrease in the diffusion gradient of gases, water and cell-sap and finally, the gradual arrest of the respiratory mechanism due to accumulation of harmful metabolites, are the chief internal factors responsible for retarding the process of growth, since all other external factors were supplied above the requirements of the plants growing in the field.

(i) *Water*

In the preceding discussion, it was shown that the fall in the metabolic activity was not only to be noticed in the entire plant, but that it was a characteristic feature of the protoplasm invariably. This a fall in the protoplasmic hydration [41 & 42] (cf. MacDougal [82]) as well as that of metabolism in general, appears to be of great significance in the vegetative growth of the plant.

Dufrenoy goes even to the extent of pointing out that growth-rate depends upon the balance between the sum of imbibition, the osmotic pressure of colloids, and of the salts

of the cell sap, the sum of the tension of membrane, the osmotic pressure of the salts of the surrounding medium and the mechanical resistance of the media. But the vegetative and reproductive phases of plant life are so opposed to each other and so divergent in character that the conditions promoting the one degrade the other. Hence whatever the cause of the fall in the growth rate with age, the correspondence of the respiratory-index curve of the meristematic tissue with that of the hydration on the one hand, and the *healing* of the mechanical wounds (regeneration of cells) with age on the other, establishes to some degree of accuracy that *a fall in the colloidal hydration of the protoplasm may be one of the several causes leading to cessation of growth processes.*

The fact that the water-content in the leaves and other organs greatly influences the carbohydrate ratio of polysaccharide to monosaccharide, serves to emphasise the important rôle which water plays in all the metabolic activities, not to mention its importance as a promoter of chemical reactions in general. A definite carbohydrate compound may be associated with high or low water content giving a specific growth rate. Thus it was noted that at a time the Artocarpus[30] and cotton[41] plants were fully laden with fruits, with, the appearance of a heavy shower of rain the fruits began to shed and the vegetative growth which had almost ceased was seen to revive by the reappearance of vegetative buds in fresh luxuriance. The shedding of the Cotton bolls[41] and the mango flowers[41] has already been partly attributed to a shortage in the supply of water to the developing reproductive organs.

In view of the increased demand of water made by the developing reproductive organs it is not certain whether fall in the water content of the vegetative tissue is due to some disturbance in the balance between the intake of water and that lost by transpiration, as has been noted by the increased rate of transpiration[18 & 19] with ageing following a lowering in the organisational resistance in the tissue[5, 21 & 22].

or is merely a periodic function of the age-span of the plant in order to supply the reproductive organs. But the close dependence of vegetative growth on a proper supply of water remains undeniable. The fall in water-content of the tissue is certainly due to some internal change in the colloidal complex of the protoplasm, for in the preceding experiments water was always supplied to plants growing under field conditions such that it did not limit the demand made by the plant. It can, therefore, be safely inferred that a decrease in water content in the growing region, possibly due to some internal cause, limits the activity of the protoplasm and thus adds to senility.

The relation of water content to the colloidal mass of protoplasm* as affecting the metabolic processes and variation in the concentration of the cell-sap, is considered by the author to be the basic principle of growth but at the same time the molecular surface tension, the imbibition of the colloidal mass make the process much complicated.

(*n*) *Nutrition*

The importance of nutrition organic or inorganic, in plant growth is so obvious that elaboration on this score would seem unnecessary. But the significance of the experimental data is so marked as to warrant some mention.

Whether a fall in the supply of food substratum also adds to the decrease in the growth-rate, has hardly been directly studied in the case of higher plants because of experimental difficulties except some work relating to the multiplication of the lower plants in different nutrient solutions of varying concentrations.

The data on Radish, Beet root [47 a 48] and Knol Kohl [49] plants seem to throw interesting side-lights on the question. Thus it was noted that, as contrasted with the growth-rate curves of cotton or mustard, [41], the curves of both the

*Independent evidence is being collected by the author on artificial cells and the physical properties thereof in changing media. Compare also in this connection the very interesting and instructive work of MacDougal [50] on Hydration and Growth.

growth-rate and respiration of the plant exhibited two cycles of active growth constituting two parabolas. The latter phase of growth is shown to be mainly at the expense of the food materials stored in the fleshy root of the Radish as assimilatory-index of the leaves was minimal, emphasising further that the food factor has a marked influence on the growth-rate and if this be in excess prolongation of growth activity of the plant is likely to take place. But in spite of the reserve being in excess in the storage organs, we note a subsequent decrease in growth rate till finally the penultimate senescent stage and the last stage of senescence overtake the growth-rate.

To what extent and in what degree the process of growth may have been influenced in the Radish, can not be said with any definiteness. Nonetheless this much is clear that the food factor does prolong the life-cycle of the plant if other conditioning factors be not limiting, although senescence may ultimately intervene in spite of the excess of food material. Hence senescence must ultimately be traced to some other cause besides the food factor and water-content of the protoplasm which in their turn may also contribute towards senescence.

(iii) *Metabolism*

Whatever be the cause for bringing about senescence it must ultimately be traced to a failure of the metabolic machinery which is the main vehicle in the process of growth. Hence a clear knowledge of this may lead to a better understanding of the mechanism of both senescence and rejuvenescence.

While considering the comparative data on growth-rate and other metabolic activities in the preceding pages, it was generalised that the correlated run of many physiological activities such as the power of regeneration, respiration of the entire plant and the meristematic tissue, assimilation, transpiring power, water-holding capacity of the protoplasm and other physiological ratios (leaf-area and leaf-weight-

ratios) indicated a connected sequence of events inside the protoplasm during growth and their striking parallel decline with age was interpreted as a general expression of the qualitative change in the protoplasm designated by the author as "Metabolic senescence" which affects many physiological activities simultaneously in spite of their diversity.

Of the many physiological processes known to occur in the organism 'the one which is most closely linked with the present conception of vitality is the function which is named respiration,' the energy supplier for every activity in the plant, and which thus gives expression of each variation in the intensity of the metabolic activity of cell from its youngest up to the last stage of life. Hence an insight into the mechanism of respiration with age should give a clear conception of senescence. While engaged on the intensive analytical studies of the mechanism of respiration in plants which forms the author's main work it has been shown elsewhere [34] that prolonged starvation by keeping the leaves in the dark, anaerobiosis, and continued effect of temperature are similar in their effects in increasing the intensity of 'time factor' on respiration of the leaves of Artocarpus, Eugenia and Mustard, to mention only a few cases. Thus by studying the 'AIR-NITROGEN' and 'NITROGEN-AIR' after-effects along with a study of the ratio of aerobic and anaerobic respirations throughout the life-cycle of the Mustard plant it has been shown by the author that there is an accumulation of toxic substances as age advances which have also a profound influence on the respiration and growth machinery [35].

The 'time-effect,' viz., the fall in respiration intensity of young, adolescent, penultimate-senescent and senescent leaves has been ascribed by the author to the accumulation of harmful metabolites of the nature of tannins, anthocyanins, flavones, other allied groups, alcohol, aldehydic and ketonic substances which greatly preponderate in the cell centre under such conditions for want of a complete working up of the reacting mass to the final CO_2 and water. These harmful metabolites affect the respiration enzymes as also

the hydrolytic enzymes designated by the author the *Harbinger enzymes*[33, 34, 35, 36], either directly or through a phosphate-co enzyme on the one hand, and the critical concentration of the sugar substratum on the other.

It may be of interest to make a reference in this connection to the experiment of Lawrence Balls on the effect of temperature on the growth of the 'Shore-shut' fungus and of the root of the cotton plant[6, 8, 7] and the experiments conducted in this laboratory on sugarcane[37]. Thus with the acceleration of growth-rate due to temperature Balls noted that the toxic substance went on increasing in a logarithmic ratio, till it was powerful enough to arrest the growth-rate at about a temperature of 37°C. In the analysis of the different carbohydrates in the case of sugarcane it was shown that with age the *X* substance went on varying inversely as growth till it attained a concentration when there was no further growth in the plant (Fig. 5). In this production of toxins a normal feature of growth?

Further it has already been shown that the proportion of the monosaccharides corresponds with the intensity of respiration as well as growth-rate[34] (cf. Fig. 3 also). The dependence of growth rate on the inter-conversion of the different groups of carbohydrates, proteins and their derivatives, the fats and the salts which make up the 'protoplasmic engine' through the medium of specific enzymes requires no elaboration. Hence the hypothesis put forward by the author on the mechanism of respiration that accumulation of metabolites brings about a fall in the intensity of respiration, applies equally well in the case of growth of plants since a close parallelism has already been established in respiration and growth of plants with advancing age. That also is the author's justification, on experimental basis, for putting forward the hypothesis that the decline in growth rate or in other words, ageing is simply due to the progressive accumulation of harmful metabolites for in nature, anaerobiosis, starvation and stress of high temperature are not uncommon.

(iv) *Permeability, Concentration of O_2 and CO_2 within the cell-centre*

In addition to the above, a consideration of the permeability of the plant tissues with advancing age as well as the concentration of oxygen and of carbon-di oxide inside the plant tissue, and the transport of plastic material from cell to cell in a growing organism is important. With increasing age increase in the non-living tissue is a common phenomenon and it must ultimately hinder gaseous diffusion, O_2 in, and CO_2 out. This being so, anaerobiosis will be induced within the tissue and as a consequence of this, CO_2 will accumulate, act as a toxin and thereby decrease the rate of metabolism, a conclusion which has been arrived at by Lillie [30] although in a different manner. Thus for instance, Lillie suggests that in the absence of excitation the plasma membrane becomes slightly impermeable to CO_2, consequently the CO_2 resulting from metabolism accumulates within the cell and decreases the rate of dynamic processes. External stimulation increases the permeability of the membrane to carbon-di-oxide and thus permits the escape of CO_2 from cell to cell and brings about an increase in the rate of metabolism.

While studying the respiratory mechanism of massive plant organs it has clearly been established by the author [31, 32, 33] *that the processes of senescence and ripening in the organ go hand-in-hand and are accelerated by the accumulation of CO_2 in the tissue of the flesh.*

Further observations made by the author point to the conclusion *that with the advance in the age of the plant, besides a gradual fall in the water content and accumulation of the more complex organic food materials, the channels of translocation for the upward transpiration stream of water and for the downward flow of the manufactured food material become partly blocked up, such that some of the channels become impervious to the diffusion gases, cell sap and water.*

In view of the above mentioned happenings in the plant

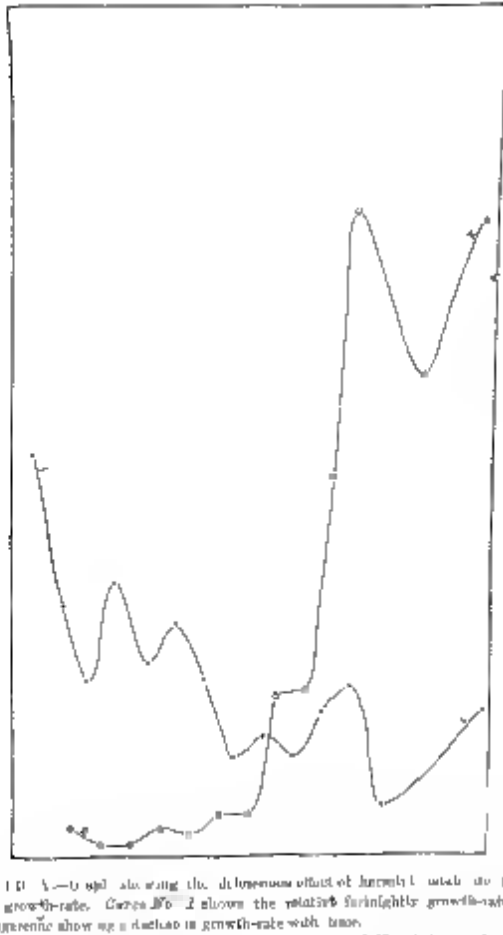

FIG. 5.—Curves showing the differences effect of increasing [illegible] on growth-rate. *Curve No. 1* shows the relative fluctuations in growth-rate in Saprolegnia when we a decline in growth-rate with time.

Curve No. 2 obtained by plotting the values of X a balance which is shown to be proportional to intervening in an inverse sense [illegible] Healthy thereby an inhibitory influence of X upon growth-rate

tissues and the cells the passage of both water and cell-sap is greatly decreased, inducing thereby a *mirfit* in the demand made by the cell for water and the plastic food material on the one hand, and the supply and removal of accumulated toxic metabolites, on the other, *thus following a shortage in the supply of active mass of the reacting substratum a gradual decrease in the relative velocity of reaction inside the cell and consequently in the rate of metabolism and growth is the net outcome.*

(v) *Cell Chemistry*

Side references have already been made presently regarding the change in the critical concentration of the respirable substrate, the accumulation of harmful metabolites, the inactivation of enzymes, the rise in the concentration of the soluble sugar particularly noted in the case of fruits, the diversion of the plastic food material and water towards the development of the reproductive organs. It remains only to emphasise the importance of C|N and Monosaccharide|Amino-acid ratios on the young, adolescent, penultimate-senescent and the senescent stages in the life-history of the plant and the plant organs which have four different histories of their chemistry. Taking for instance a particular case, it is shown that higher C|N and Mono-|Amino-ratios seem to follow the gradient of senescence, and rightly so, since such ratios will increase the amount of carbohydrates and reduce nitrogenous matter which is eminently required for the formation of the protoplasm during vegetative growth.

(vi) *Periodicity in Growth-rate*

Before leaving the question of the nature of senescence it is necessary to call attention to another and a more important factor, viz., the periodicity or cyclic changes that are the dominating features of practically all organisms. Some of the periodic changes may be determined by external factors such as light, temperature, etc., while the internal factors are most important. Various plant cells and organs ac-

cumulate reserve material. As the accumulation of such reserve materials proceeds they approach quiescence, but if conditions may change, they may undergo rejuvenescence

After a period of quiescence, rejuvenescence is but a necessary feature of life Certain plants with storage organs and others with loss of leaves, are followed by a quiescent period which may vary from branch to branch, from one stage of development to another, and from season to season

Allusion has already been made elsewhere [13 & 14] to the *importance of previous history* of a plant in predetermining its future activity. Thus even the daily fluctuations in flowering are predetermined and controlled by the weather conditions which obtained a month before the flower bud opens Effect of *size*, weight and relative density of the seeds [17] and the previous treatments to which they might have been subjected predetermine the life-history of the plant and their importance is but obvious It is quite likely what we call periodicity may simply be associated with the cell chemistry in the rhythmic accumulation and removal of metabolites. Periodicity itself may result from the existing conditions between chemical reactions or metabolism and the colloidal complex, some continuing for a shorter period while others for a longer period. The shorter or longer periodicity of the age-cycle may be only due to the accumulation of metabolites which may vary from shorter intervals to longer intervals of life.

Thus a review of what has been said, appears to point to the conclusion that the explanation of senescence or old age lies not exclusively in any *one* of the aforesaid factors but in a *correlation* of them all. Each of them supplies a path which may be used to arrive at the same end. *The end to be reached, in order that the reaction velocity of the reactants may be increased, is to diminish the resistance to the reaction obtaining within that wonderful laboratory, the cell*

V—THE BASIS OF REJUVENESCENCE IN PLANTS

The brief consideration, incomplete though it be within the scope of the prescribed pages, has emphasised the view that senescence in plants is due to a progressive accumulation of metabolites with advancing age due to incomplete working of the reacting mass to the final product and its consequent non-removal from the seat of activity. If this be true, how are we to interpret the phenomenon of rejuvenation in plants? But before we try to trace the cause of rejuvenescence we might endeavour to understand what rejuvenescence is.

Invariably in all the plants that the author has experimented upon it has been noted that the general fall in the dynamic processes of growth-rate was interrupted by a sudden rise before the initiation of the reproductive phase. This 'maximal march' in respiration, growth-rate and the nonoscillations before the initiation of the reproductive organs, was shown to be a phenomenon of general occurrence in different species, in different varieties of the same species, in different types of plants of various habitats, in annuals, biennials and perennials where there may be several crops of reproductive organs, appears as many times as reproductive organs are produced. (Cf. Figs. 2 and 4 also).

It is noteworthy that in the growth experiments of two varieties of Beet-root, this 'maximal hump' in the curves is only indicative of adolescence, the reproductive phase following it as a result of increased metabolic activity, unless the plant be sterile due to certain internal or external causes, (see Fig. 2) *even as a girl may attain puberty and yet fail to produce offspring. This 'maximum' has therefore been shown to be due to an increase in the velocity of the dynamic processes and to this we give the general name of 'rejuvenescence'.*

We explain senescence to be due to an accumulation of metabolites and if this be true as indeed experimental evidence points to, how are we to explain rejuvenescence? Rejuvenescence then I explain by simply supposing that after a

certain stage in the accumulation of metabolites (after a certain critical stage in the reacting mass has been reached) there is a sudden working back in the form of a backward reaction due to a disturbance in the colloidal mass, resulting in the loss of equilibrium. Such an assumption presupposes only the *'Law of Mass Action'* in the reaction media of the protoplasm, an assumption which has been shown to be an experimental truth in more than one place by the author. Whether rejuvenescence is connected in some way with the periodicity of the protoplasm remains an open question.

VI—CONCLUDING REMARKS

We can therefore follow the processes of Senescence, Rejuvenescence and Death in somewhat similar manner that we follow the progress of a chemical reaction. In both cases we obtain curves which may be subjected to mathematical analysis from which conclusion may be drawn regarding the nature of the processes.

Thus the basis of both senescence and rejuvenescence appears to be, to a large extent, the accumulation and a sudden removal of metabolites following the Law of Mass Action. According to this hypothesis when a state of reactivity is reached in which the forward reaction is kept so much in abeyance through the accumulation of harmful metabolites that the reactivity becomes irreversible, 'death' supervenes. The simple hypothesis of senescence, rejuvenescence and death in plants, founded as it is on experimental evidence, to the exclusion of unnecessary speculation, appears to the author to be sound.

What applies to the case of plants may equally apply to that of animal senescence and rejuvenescence. Thus the author's *work brings into unity not only the living phenomena but unity at a unity between the animate and the inanimate, viz., throughout natural phenomena by reducing the life-unit to simple elements of chemistry and physics and by indicating the application of laws governing physical-chemical reactions to life functions of the organisms.*

But this represents an analysis only of a small portion of the phenomena of life and verily one may exclaim with Newton, it just a drop in the ocean, needing to be followed up by a series of investigations which will pave the way for the creation of living protoplasm from the non-living elements. For, does it not follow that an attempt to break asunder a complex structure to its final elements must have its complement in an endeavour to resynthesise the analysed matter into a harmonious whole before it can be hailed with success. Although I have accumulated evidence on the practical applications of their results to increasing the life duration and checking senescence in plants, space does not permit its discussion in the present paper.

I leave it to the reader to judge if the hypothesis put forward for plant senescence and rejuvenescence has anything in common with the principles of YOGA and PRANAYAMA expounded by our RISHIS in our ancient *Shastras* and so much advocated by that great personage, I mean the venerable Pandit Madan Mohan Malaviyaji. Let us endeavour to emulate as much as our individual capacity would permit, the model life of that glorious and inspiring individual, whose 70th birthday we have the proud privilege of commemorating, and to discover the key-note of his success against the retarding influence of ageing in exhibiting unabated energy and enthusiasm in the cause of religion education, politics and humanity as a whole. In the end it is my earnest prayer that Panditji may continue to successfully combat the influence of ageing for a good long time.

BIRBAL NATH SINGH

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Section V—Greetings, Appreciations and Memoirs

PANDIT MADAN MOHAN MALAVIYA
Age about 25

PANDIT MADAN MOHAN MALAVIYA

Some Personal Reminiscences

It has been my privilege to come into contact with Pandit Madan Mohan Malaviya on more than a dozen occasions within the past 22 years and on several of these occasions I have had opportunities of discussing with him at length topics of common interest to us, particularly in the spheres of education, politics and economics. I will briefly recall here some of my reminiscences of such occasions

Political Activities

It was at the session of the Indian National Congress in December 1910 at Allahabad which I attended as a visitor that I first made the acquaintance of the Pandit He took a prominent part in conducting the business of that session, and whenever questions arose, spoke with assurance and eloquence In his characteristic plain white clothes, he was easily the star-figure in the assembly.

The next time I came within the ambit of his political activities was in December 1921 when he led a deputation to the Viceroy in which Dr Annie Besant and several prominent Indian leaders took part I was then in Calcutta and he asked me also to join the deputation, the object of which was to suggest measures to Government calculated to allay the unrest prevailing at the time and to voice public dissatisfaction at the inadequacy of political reforms which had been introduced the year before and to demand an immediate advance to enable the country to enter on a career of constructive activities and peaceful progress which were not thought possible under the limitations imposed by the Parliamentary Act of 1919.

Shortly after this, that is, on January 10, 1922, a representative all-parties Conference was convened in Bombay chiefly at the initiative of the Pandit, which Mahatma Gandhi also attended. A Committee was appointed to give

practical effect to the objects of the Conference in which along with the Pandit, Mr M. A. Jinnah and M. R. Jayakar who took part, my name was also included But the work of the Committee ended abruptly in certain circumstances which are now matters of history

The Pandit has waged many a fight in the people's cause on the Congress platform since 1886 and in the Imperial Legislative Council and its successor, the Indian Legislative Assembly since 1910 In all political struggles he has been in the forefront of the battle. Till two or three years ago, he kept to the strict and narrow path of constitutional agitation and when last year the agitation was at its height and leader after leader was sent to prison including his great friend and compatriot Mahatma Gandhi, he joined the Working Committee of the Congress which was then a proscribed organisation That led to his arrest and subsequent incarceration. To an orthodox Hindu, prison life is particularly abhorrent, but he made this supreme sacrifice when he felt the country's interests demanded it

Benares Hindu University

The Pandit's most notable achievement in the sphere of constructive activities is the establishment of the Hindu University at Benares for which he has worked ceaselessly for over 25 years. Such important institutions are usually built up by the benefactions of super rich men, or by high officials taking the lead with the backing of Government, or by means of public subscriptions raised to commemorate a great name. But in the present case the University has been brought into existence by the devoted exertions of a private citizen, mainly through the trust reposed by the public in his devotion character and high moral purpose

Benares was selected for the location of this University because that city is an old and historic centre of learning and is held in veneration by millions of Hindus as the principal seat of their faith His Highness the Maharaja of Mysore was prevailed upon to become the first Chancellor and it

was recognised at the time that having regard to His Highness' well known piety, love of Sanskrit literature and devotion to the Hindu religion no more fitting choice could have been made for that high office.

Pandit Malaviya started with a definite concept of what the University was to do and what the general disposition was to be of the various buildings which were to give it habitation. He sought to preserve the best thought and culture of Hindu religion and philosophy and, at the same time, to train experts in science, men of business and industrial leaders, who would help to increase the country's production and wealth. He discussed some of these questions with me at Delhi and other places. He took enormous trouble to consult every one within his reach whose views were worth knowing—engineers, architects, educationists and industrial leaders—but while profiting from all such advice, adhered in essentials to the original plan on which the general scheme had been started.

The Pandit carried on an intensive campaign to collect funds and build up the University from stage to stage. He approached Princes and Chiefs, waited on high Government officials, visited important centres and addressed great gatherings at which he appealed to the patriotism of merchants and Zamindars and to the religious instincts of the Hindus for this purpose. I was present at one such gathering in Calcutta which he addressed in Hindi with great force and eloquence—I believe this was in January 1912—when rich Zamindars, Marwari merchants and others came forward with promises of large sums, many handing in bundles of currency notes on the spot. The moving eloquence of the Pandit had evidently told on the audience and money literally poured in on that occasion.

I visited Benares by invitation in January 1923 and found that the University had taken a definite shape. A noble pile of buildings had sprung up. Instruction up to the highest degree in the various branches of Art and Science and teaching in Sanskrit Classics were in full swing. A

high class College in Engineering had begun work and attempts were being made to start a College of Agriculture. Although the University was still in the stage of development, it had already made a mark as an all India centre of learning and was attracting students from all parts of the country.

The Pandit's political activities have both helped and hindered his work for the University. It was his reputation as a man of learning and piety and a disinterested political worker that enabled him to make a satisfactory start. On more than one occasion he was in disfavour with the Government and there were apprehensions of stoppage of Government contributions to the Institution. Recently when he was sent to prison for his political opinions, it was freely talked about that the staff would have to be placed on half-pay.

Other Interests and Activities

The Pandit's interests are nation wide and are not confined to politics or education. Every good public cause has his sympathy and support. He has been a strong supporter of compulsory primary education from the time the late Mr. Gokhale introduced his bill in the Imperial Legislative Council in 1911. He has also been one of the principal organisers of the Hindu Mahasabha Movement, the object of which is to promote co-operative effort for all good purposes among the Hindus so that the community may not fall below other nationalities, either within or outside the country, in energy and virile power for defence or self-improvement.

He is in favour of giving military training to the people of every Province or State, so that they may be able, if need arises, to defend their hearths and homes. And he has been a vigorous advocate of the policy of industrial development in the country. The minute he wrote for the Report of the Industrial Commission (1916-18) has often been quoted as the true Indian view of the industrial needs of the country. In that minute he has pointed out how Indian industries have

suffered in the past by discouragement and neglect and how vital it is to foster industries on modern lines for the economic uplift of the country. If a genuine movement for this purpose were set on foot, he hopes to be able to carry on a campaign and collect a very large sum within the country itself to provide the capital needed for organised industries.

His Oratory and Personal Characteristics

The Pandit's effectiveness as a public worker is considerably enhanced by his fine powers of oratory. He has a pleasing mellow voice and his exposition of subjects is lit by many lights. Knowledge of Sanskrit classics, wide acquaintance with English history and literature, deep study of the condition of the masses and researches in current finance and economics, all help to adorn his discourses. He can speak for hours without a note and his addresses in Hindi have a remarkable value in moulding the thoughts of his orthodox audiences, particularly in Northern India. He has throughout maintained a continuity of aim and consistency of principle in all his public utterances and activities. His simple habits and plain living are also in his favour and they make a peculiar appeal to the Indian masses. A man who does not seek comfort and fortune for himself when both are within reach is most likely to feel compassion for the poor and the distressed.

An Estimate of His Work

A man of deep culture, broad sympathies, an intrepid and selfless worker, he is popular with all classes of his countrymen. While not actually taking part in political controversies, he is known to enjoy the regard and confidence of high dignitaries, notwithstanding the fact that all his life he has been struggling to soften the rigours of bureaucratic rule for his countrymen. His winsome manners and amiable personality have contributed not a little to gain for him the esteem of his adversaries. His European opponents know that he is a clean fighter and respect him on that account. The Indian Princes regard him as their friend, and, while he

is the idol of his orthodox countrymen, he is not unpopular with the reformers. He is no bigot; his attitude of late years towards the untouchables and depressed classes has undergone a remarkable change in their favour; and, when duty to his country demanded it, he readily crossed the seas to visit Europe. His chief claim to the confidence and gratitude of his countrymen is his intense concern for their welfare, the enthusiasm he has roused among them for national objects and the impetus he has given to nation-building. A noble and lovable personality, a staunch Hindu and a great Indian, all he thinks of, all he works for, are the interests of his community and country; to these interests he is giving every moment of his waking time.

M. VISVESVARAYYA

MADAN MOHAN MALAVIYA:

Reminiscences and Appreciation

I have known Pandit Madan Mohan Malaviya principally in connection with his endeavours to get Mysore connected with the Benares Hindu University. In that connection, he visited Mysore at least twice. Though I had heard of him before then, by his eminent public services, I had not known him personally. My first meeting with him proved quite an experience. Some people had described him as an "anti-Musalman". A short conversation showed how unfair was such a description of the patriotic personality before me. The example, indeed, was more than sufficient to make me doubt the accuracy of popular verdicts! Pandit Malaviya is simply pro-Indian first and last. What impressed me most in him was his humility, his self-effacement and his sense of the greatness of moral values. They say that self abnegation is the law of life. If that be so,—few, I think, will be disposed to dispute it—here is one who has demonstrated it in his work for the country. I have heard a great lawyer say that if Mr. Malaviya had so willed it, he would have been an ornament to the legal profession. Perhaps a College Professor would say, with equal truth, that had he so desired, he would have been a splendid teacher of youth. A philosophically inclined person might claim him, perhaps with equal right, for his own fold. I am emphasising not so much his versatility as the sacrifice he has made for the sake of advancing public interests. That is the outstanding merit of Pandit Malaviya. I draw pointed attention to it because it offers the true key to his character and his achievements in public service.

I do not think I need refer at any great length to his many sided activities or to his great oratorical gifts, though of the latter something interesting might be said. He possesses in eminent degree the three great powers of the orator—to instruct, to move, to delight. The perfect rare of dona-

tions that has followed many a public speech of his on behalf of the Benares University has, no doubt, to be set down to the marvellous effect on men's minds of his splendid eloquence. I sometimes wonder whether, in these days of crippled finances, Mysore may not secure unto herself an equally good money-dragging orator with my friend, the worthy Pandit. Perhaps the greatest achievement of Pandit Malaviya in the field of practical action has been the foundation of the Benares Hindu University, which will ever stand a public monument to his disinterested labours in the cause of public education in the country. His persuasive skill carried all before him. After his second visit, it was almost impossible to resist him. The result was that His Highness the Maharaja of Mysore accepted the Chancellorship of the Benares University. I am happy in the thought that what His Highness's Government could do was done for this University. Quite apart from the financial aspect of the matter, Pandit Malaviya was anxious to have the moral support of a Maharaja who is acknowledged on all hands to be the type of what a Hindu Sovereign should be—a father to his subjects in the truest sense of that ancient and hallowed phrase.

It is pleasing to feel that a just tribute to the great work done by Pandit Malaviya is being paid to him on the 70th Anniversary of his birth. Pandit Malaviya wears his years lightly. He is, as the poet would have it,—

"A man not old, but mellow like good wine."

I gladly join my countrymen in paying my personal tribute to the eminent worth and work of one of the foremost among Indian patriots.

M. ISMAIL

PANDIT MADAN MOHAN MALAVIYA AS I HAVE KNOWN HIM

I feel highly honoured by the invitation, extended to me by the Madan Mohan Malaviya Commemoration Volume Committee, to contribute a paper on some of my personal reminiscences of the great patriot, eminent orator and distinguished educationist, whose innumerable services to the country the book is intended to record and popularize. I readily respond to this invitation with great pleasure, not only because of the happy and cordial relations, which have subsisted between Pandit Malaviya and myself for now a period of over forty years, but also because it has been my great privilege to have been associated with him, in many public activities, both in the central legislature of the country, and also outside it. There is also this fact to keep in mind that, unfortunately for our country, a large number of the public workers and leaders of public opinion, with whom Pandit Malaviya has been associated in his long public career, have passed away, and I doubt if there are now many left, who may claim, as I may do, to have known and worked with Pandit Malaviya for now over four decades. This is, therefore, an additional reason for my acceding to the wishes of those who have made themselves responsible for the Commemoration Volume.

It is now forty three years since I—then a youth of seventeen—first heard the name of Pandit Malaviya, as a young and enthusiastic worker in the cause of our country Members of my family had long been connected with various branches of the public services, both in Calcutta (then the seat of the Government of Bengal and Bihar), and also Agra and Allahabad, from a time anterior to the creation of the then North Western Provinces, in 1835, as a separate administration from that of the "Bengal Presidency". And so it happened that in 1888, some of those members of my

family, who were then occupying high positions in the judicial services, in what is now the "Province of Agra", were at our ancestral village, (in the Shahabad district of Behar) with their sons, who were prosecuting their studies in the Muir Central College, Allahabad I was at that time studying in the first year class of the Patna College, and happened to go to my ancestral village, during the summer vacation. It was there that I first heard glowing encomiums from my relations, on the public career of the youthful Pandit Malaviya I shall never forget, if I live to be a hundred, the deep impression which the panegyrics, which my young relations bestowed upon the public activities and the eloquence of Pandit Malaviya, made upon me Not only (as I soon came to find out for myself) did they very justly extol his patriotism, and hold up to my emulation his earnestness and enthusiasm in the cause of the country, but they also expressed the highest admiration for his powers of public speaking, as an accomplished debater and a powerful orator alike in Hindi and English The result was that I developed a strong inclination to make his personal acquaintance, and I made up my mind to go to Allahabad to meet him there, at the earliest opportunity. Fortunately, for me, the fourth session of the Indian National Congress was to be held that very year at Allahabad, during the Christmas week, and accordingly I not only made up my mind to meet Pandit Malaviya at the Congress and hear him but communicated my resolution to my relations, who cordially welcomed the idea and encouraged me to come to Allahabad And so as soon as the Patna College closed for the Christmas vacation, I found myself in a third class compartment on my way to Allahabad.

II

The session of the Congress, which was held at Allahabad in 1888, was, in more senses than one, a unique demonstration of the rising upheaval of the national consciousness of India, which had been accelerated by the strenuous opposition to

the nationalist movement by the late Sir Auckland Colvin—the head of the administration, at that time, of the North-Western Provinces and Oudh—and also by the late Sir Syed Ahmed. The result was that Congressmen had been naturally put upon their mettle and they left no stone unturned to make the session not only successful but memorable. They accordingly secured for their president a well-known and liberal minded Scotsman, an ex president of the Bengal Chamber of Commerce, and a man of very great influence in the British commercial community in India, namely the late Mr. George Yule. For the chairmanship of the Reception Committee, they had the worthiest Indian then available in the person of the late Pandit Ayodhyanath, the leader of the Vakil Bar in the Allahabad High Court. Till then the province of Behar had not taken an active part in Congress politics and affairs, and had been wholly unrepresented at the first session of the Congress (held in Bombay in 1885), and but poorly so at the second and third sessions held in Calcutta and Madras respectively; but there was a strong contingent from Behar at the Allhabad Congress, which was a unique and an unprecedented gathering. It was amidst such surroundings that I found myself in the visitor's gallery, when the Congress opened on the first day of the session, with a wonderfully impressive speech delivered by Pandit Ayodhyanath, and a highly thoughtful and strikingly suggestive presidential address by Mr George Yule. I was so much interested in the proceedings of the Congress that I sat so to say, glued to my seat all the days and all the time that its session lasted. I heard—for the first time—dozens and scores of eminent Indian leaders, addressing that vast concourse. Some of the powerful speeches delivered by the greatest Indian speakers of the time made a deep impression on my young mind—for instance, those by Surendranath Banerjee and Kali Charan Banerjee of Calcutta, Eardley Norton of Madras, and Pherozshah Mehta and Kashinath Trimbak Telang of Bombay. All seemed to me wonderful and extraordinary performances, and so no doubt they were,

especially as then judged, according to the standard of a young student, by me. But while I admired these all, none of the speakers made such an ineffaceable and indelible impression on my mind as did the truly eloquent speeches of Pandit Malaviya. I fully remember, even now, how intently absorbed I sat all the time Pandit Malaviya addressed that vast gathering. Unlike the great orators named above, Pandit Malaviya's speeches seemed to me to combine rare eloquence with remarkable sweetness and suavity. This first impression of mine of the characteristic of Pandit Malaviya, as a public speaker, has since then grown with my growth and strengthened with my strength, and during the many years in which he and I worked together in the Imperial Legislative Council and outside it, the conviction has steadily grown upon me that though India has produced several unrivalled orators and debaters, Pandit Malaviya is unique in the sense of being the only public speaker who tries to persuade the audience, not by reason of the power and vehemence of his language, but by great tact, wonderful gentleness and extraordinary charm, coupled with the most easy-flowing fluency which, all combined, produce upon the hearer's mind and attention a soothing sense, and at once carry conviction to it. I need scarcely add that I managed to get myself introduced to Pandit Malaviya by my relations, who knew him well, and I shall never forget the kindness with which he treated me, and so I returned from Allahabad on January 1, 1889, as the happiest young student in India at that time.

III

In less than six months, I had another opportunity, given to me providentially, not only to meet Pandit Malaviya, but to have the privilege of playing the host to him and entertaining him, as a highly honoured guest, in my small student's residence, at Patna. This is how it occurred. I had gone back from Patna (during the course of the long vacation of the College in 1889) to my native town, Arrah, where I

heard from some persons, who were Congressmen, that Pandit Malaviya was expected there on the errand of the Congress. I knew that Pandit Malaviya was at that time editing a Hindi paper, called the *Hindustan*, of which a great Congress leader of that time, Raja Ram Pal Singh (of Kalankakar, in Oudh) was the proprietor. Ostensibly, therefore, Pandit Malaviya was coming to Behar to advance the interests of the journal he edited, but his primary object undoubtedly was to popularise the Congress movement. He stayed for a couple of days at Arrah, and all the time, I was only too glad to get there an opportunity of attending upon him. He was so pleased with me that when planning his visit to Patna, he asked me if I could arrange to put him up. I said at once that though I was living in a small rented house near the Patna College, I would deem it as a very great privilege, indeed, if he would honour me by accepting my hospitality. He most readily accepted my offer, and accordingly at the end of his visit to Arrah, both he and I went together to Patna, where he stayed for three days in my rooms. As he was not accompanied by any servant, he had to cook his meals, both in the day and at night. I had become so much attached to his personality that I gladly sat, not very far from him, and talked to him all the time, even when he was cooking and taking his meals. Of course, he saw the leading Congressmen of Patna at that time, the most prominent amongst whom was the late Mr. Syed Sharfuddin (afterwards Mr. Justice Sharfuddin of the Calcutta and the Patna High Courts), and a public meeting was also held, which he addressed most eloquently, both in English and Hindi. When leaving Patna, he very kindly promised to take a personal interest in my career which, I am glad to testify, he has always done since.

Soon after Pandit Malaviya's departure, circumstances forced me to think of going to England to be called to the Bar, and as I had nothing to fall back upon at that time, except such wits as Providence had endowed me with, I naturally thought of writing to Pandit Malaviya to secure for me some

pecuniary aid from Raja Ram Pal Singh. I remember distinctly that I wrote many similar letters to a number of distinguished Indian publicmen, some of whom I had come to know at the Allahabad session of the Congress. I have long since realized, when I did not do then, that it was foolish of me to have expected a response from any of them. But I recall with great gratification that of all those whom I addressed the only one reply I received, to my communication was from Pandit Malaviya. Of course, he was unable to assist me, as the Raja Saheb had many far more deserving claimants on his purse than myself, but Pandit Malaviya wrote to me a highly sympathetic and genuine friendly letter (which is still a cherished possession of mine), in which he declared his conviction that though I might fail in my efforts to proceed to London to qualify myself for the Bar, he felt sure, from what he knew of me, that I would "go far and and fare well" His Brahminical prediction has certainly come off true in my case, for (from my point of view) I have had little to complain of in the course of a fairly long life. But it is for Pandit Malaviya to say whether his expectations of my career have been as all realized.

IV

I returned from London, to Allahabad, in February 1893, after my call to the Bar on January 26 of that year. There were at that time, at Allahabad, a number of my friends, specially from Behar, the most prominent amongst whom was the now senior puisne judge of the Patna High Court, Mr. Justice Jwala Prasad. More than forty years back, few Hindus from Upper India had crossed the seas, and, in my case, I happened to be the first Hindu from Behar, who had returned after qualifying in London. Naturally, therefore, there was a strong feeling that I should be accorded, on my return to Allahabad, a public welcome, and accordingly a large meeting was arranged in the hall of the old Kayastha Pathshala buildings, which was presided over by an eminent advocate of the High Court. It was at this meeting that

I had again the privilege of coming in contact with Pandit Malaviya. He made a fairly long speech, relating all that he knew about me and the impression that he had formed of me, and wished me all the good things in the world, on my joining the Patna Bar. From this time onwards, Pandit Malaviya and I used to correspond with one another on important public affairs, and used to meet either at Allahabad, or generally at the places where the annual sessions of the National Congress were held, from time to time. In 1896, however, owing to complete breakdown in my health, in Patna, where I had been practising till then, I transferred myself permanently to Allahabad, and have lived there since, in my own house. From that time onwards till January 1910, when I was elected to represent the Legislative Council of Behar and of Western Bengal (popularly known as the "Bengal Council") in the Imperial Legislative Council, Pandit Malaviya and I worked together in many public affairs at Allahabad. In July, 1899, when I founded the *Hindustan Review*, I received from him most valuable assistance, and also when I started—in January, 1903—the *Indian People*, as a weekly journal.

But the thing which I recall, at present, with a very great appreciation of Pandit Malaviya's perseverence and courage was the compilation by him of a portentous book on the Hindi Urdu controversy, which was presented with an address, by a very influential deputation, to Sir Antony MacDonnell, and as a result of which he directed the optional use of the Nagari character in the courts of the North-Western Provinces and Oudh. It was an immensely difficult task to have obtained such an order from the local government, thirty years back and none but Pandit Malaviya could have successfully achieved his purpose. For the sake of putting together this highly instructive and convincing work, he had to give up practically his practice for a period of from two to three years, and I distinctly remember him sitting in (what was called in those days) the Vakils' Association rooms of the Allahabad High Court, surrounded by

piles of book of reference and standard works on philology—in place of being immersed in legal literature in that surrounding In 1910, as mentioned above, Pandit Malaviya and I were returned to the Imperial Legislative Council to represent the two neighbouring provinces of Behar and West Bengal, and Agra and Oudh. The three years that we spent together at Calcutta and Simla impressed me very highly with the value of the great work that he did, in his capacity as a councillor, for the country, even through the medium of that hopelessly defective legislature, in which there was a standing majority of an official phalanx. Although the personality of the late Mr Gokhale overshadowed that of his other non official colleagues in the leadership of the progressive or the Congress party in the Council, yet Pandit Malaviya managed to retain his position as one of the foremost leaders and publicists in the country, and his contributions to the debate, on the many momentous problems debated upon, were always listened to, even by the official benches, with respect and admiration. Again and again, it had been my privilege to have co-operated with Pandit Malaviya in doing some little service to our country through the medium of the central legislature, during our two terms in the Imperial Legislative Council, when we served together as representatives of the two neighbouring provinces. During our second term, Mr. Gokhale had passed away Mr. Sastri had come in and our ranks were reduced by the passing away of several of our old colleagues of the times of Lords Minto and Hardinge.

Yet with all these handicaps and limitations, Pandit Malaviya achieved a notable triumph as one of the distinguished leaders of the progressive party in the Imperial Council, during the regime of Lord Chelmsford It was especially so in the year 1919, when the session was held at Simla, after the happening of the Punjab atrocities in the summer of that year The debates consequently were highly sensational, the army was especially represented by the nomination of a high military officer, and the Punjab Government

had, as its representative, its Chief Secretary, Mr Thompson (now Sir James Thompson, Chief Commissioner of Delhi). The debates lasted for days and days, in which Pandit Malaviya took perhaps the most important part Mr Thompson was regarded by the official benches as a very powerful speaker, one of almost volcanic vehemence, and his attacks on Pandit Malaviya were couched in as strong a language as he could safely indulge in, consistently with the use of Parliamentary etiquette. On one occasion he thought he would be able to score a point against Pandit Malaviya by quoting from Milton's *Paradise Lost*, but the latter was equal to the occasion, and in his reply gave Mr Thompson, not only a crushing rejoinder on the various points, but literally pulverised him by quoting another apposite stanza from the same great poet. Pandit Malaviya's Punjab speeches were truly intellectual treats of a very high order In 1920, when I was returned to the Assembly and elected its first Deputy President, Pandit Malaviya was not a member of it, he having refused to stand for election in defence to the resolution of the Nagpur session of the Congress urging non-co-operation, but he came in at the second and third elections, and retained his high position as a great parliamentary leader.

Of Pandit Malaviya and his varied public activities, I could write "much and long", but I hope, what I have been able to say so far, based upon my personal knowledge of his work and intimate association with him for over now forty years, will satisfy every reader of this volume, of what a great asset he is to the cause of our country's freedom and progress. It is not necessary for me to refer to his great and splendid work in founding and organising the Benares Hindu University, of which he has now been for some years, most deservedly, the Vice-chancellor. But above all his other services, the greatest to my mind, is his having been able to make up his mind, in his seventy-first year, to go to London to attend the second session of the Round Table Conference. Only those, who, like myself, have personal knowledge of his habits and genuine orthodoxy in matters

social, can realise what a difficult task it must have been for him to have persuaded himself to go over to London. But unlike some other friends of his, I am not in the least surprised at his having "done" it, at last. Patriotism, in the best sense of the term, a burning love for the country of his birth, and a very keen desire to ameliorate the condition of his fellow-countrymen, have been the striking key-notes of Pandit Malaviya's character as a public man, and there is nothing surprising, therefore, in his having been able to bring himself round to proceed to London, when he felt that he was bound to do so at the call of his country. I associate myself with the prayer of the very large number of his friends and admirers that Providence may vouchsafe to him, for a long time yet to come, health and strength to carry on his highly useful and most beneficial public activities, and I earnestly hope, it will fall to his lot to see, before long, our great, ancient and historic country attain the full status of a Dominion in the British Commonwealth of Nations.

SACHCHIDANANDA SINHA

MALAVIYA, AN OUTSTANDING FIGURE IN MODERN INDIA

A selfless patriot, Pandit Madan Mohan Malaviya has been an outstanding figure in Modern India. Like the late G. K. Gokhale, he realised at an early date that those who want to take to politics and the uplift of their country must be wholetime men. Before the time of these two great sons of India, politics was regarded as a recreation after the day's arduous work at the bar or at the counter or three days' picnic during the Christmas recess

Malaviyaji gave up his lucrative practice and courted poverty so that he might devote his whole attention to the country's cause in its multifarious aspects. His has been a life of dedication to the service of his motherland. The Benares Hindu University is a living monument of his unbounded and untiring energy and devotion.

Old age is said to be crabbed and full of cynicism. Pandit Malaviya has belied this description of the immortal poet With his advancing years his robust optimism impels him to undertake a distant voyage in a faroff land Next to Mahatma Gandhi it is difficult to find another man who has undergone so much sacrifice and has given such proofs of manysided activities. May he live long to fulfil his destiny.

P. C. Roy

MALAVIYAJI AND HIS WORK

Great men are similar only in greatness. In most other respects they are dissimilar. In some one special respect each is very different from the others. This is obvious. Greatness implies abnormality, departure from the norm, the rule, the average—whether it be greatness in virtue, or in vice—in some one particular respect especially. Greatness is therefore peculiar, individual, distinctive.

हरिर्हरः कुरुवीरः सखाते
महेन्द्रकल्पस्तनयः पुरस्ते ।
तथा विभूतीः सुखमः पालतुं
शिशोर्यथाशो नहि मन्य एव नः ॥

Malaviyaji, as he is affectionately known throughout the length and breadth of India, is a very unique figure altogether in the life of our country. His fine face, his winning smile, his hearty welcome, his charming conversation, his peculiar and very becoming dress, all make up a very distinguished, distinctive, and attractive personality. His capacity for perpetual travel is as extraordinary as his eloquence. There is no town of any importance in India which has not seen him and heard him, with admiration, repeatedly. And one outstanding feature of his speech, public or private, is that it never contains any 'personalities,' any dispraise of an other person, except when some conduct of his in public affairs has got to be condemned on public grounds, and even then very rarely. Next after Swami Dayananda Saraswati and the Arya Samaj, the creation of what may be called a common Hindu sentiment is due to him and the Central Hindu College and the Benares Hindu University; as the creation of a common Muslim sentiment in India is largely the work of Sir Syed Ahmad Khan and the M. A. O. College and the Aligarh University. Circumstances made the separate development of these two communal common sentiments

inevitable, and even desirable, for the purpose of solidarising countless fragments into at least two strong groups. But the time has arrived when a further and more difficult, but absolutely necessary, synthesis is needed, viz., the solidarising of the two groups and two sentiments into one group, the Indian Nation—or, better, People, for that word has softer, more humane, and less aggressive and exclusive associations than the word Nation—inspired by one sentiment, humanist patriotism.

Malaviyaji's greatest achievement is the almost single-handed creation of the Benares Hindu University out of the small seed provided by the C. H. College. The common Hindu sentiment and the University have greatly helped each other to grow. They both need a certain change of spirit now to become helpful to the country in the rapidly changing conditions of the present time.

The Indian People, if they are to live as a free, self-respecting, self-governing people, must realise that no baby is born with the word "Hindu" or "Muslim" stamped upon its forehead, while the word "human" is stamped upon its whole face and figure, that to say "I am a Hindu and not a Muslim" or "I am a Muslim and not a Hindu" is now a dangerous form of Māyā, and that to say "I am a human being" is much nearer the truth. That "I am a human being" is also Māyā, no doubt, from the highest standpoint; but it is God-made Māyā, while "I am a Hindu and not Muslim, or a Muslim and not Hindu" is man made Māyā. If the man-made Māyā is encouraged or permitted to prevail over the God made Māyā, the result to the country will be worse and ever worse servitude. But if the God-made Māyā is allowed to subordinate (it need not abolish) the man-made Māyā, the result will be very beneficent.

After having said that Malaviyaji's greatest achievement is the Benares Hindu University, one begins to wonder if his incessant work as a member of the Indian National Congress for the enfranchisement of the country is not equally great. Though the results are not so concretely visible, yet that

work has played a very important part in awakening political consciousness and desire for standing on one's own feet in the way of self-government, in the country generally and the Hindu community especially. When that political consciousness and this desire are freed from communal bias in the Hindu as well as the Muslim community, the country will attain its goal at a bound. It urgently behoves all well wishers of India and all leaders of its various communities to concentrate their energies now on the solution of this problem which is creating the chief obstacle in the way of our progress. The method of teaching religion in such a way, in all educational institutions, as will bring out the common essentials of all religions much more prominently than the non-essential differences, will probably prove very helpful.

Malaviyaji's silver-tongued eloquence captured the heart of Mr. A. O. Hume, the "father of the Congress," at its very first session, forty-six years ago, when Malaviyaji was only twenty four; its effect upon him is recorded in Mr. Hume's Report of that session. That eloquence has not waned yet, when he has completed his seventieth year.

Of these and other activities of his e.g., his great services to the cause of the Hindi language and literature, and his career at the bar, the leadership of which he could have won easily in the U. P. if his heart had not been filled with another and far nobler love, I will not speak here further. But it must be said that his entering jail, in 1930-31, in the sacred non-violent fight of the Indian People for freedom, and his journey to England therefor, for the promotion of the cause, in his seventieth year, and against all his lifelong habits and ways, has won the heart of Hindus as not even his splendid creation of the Benares Hindu University has done.

I must mention in conclusion one trait which has appealed to me very greatly, and which, very likely, only a few others have had opportunity to observe. I mean Malaviyaji's deep study and profoundly devotional yet discriminating

appreciation of the beauties of that book of books, the *Bhāgavata*. He has studied the other great epics too, of course. He once showed me a large volume of manuscript, containing verses he had selected from these, mainly from the *Mahābhārata*. But to hear him recite and expound from the *Bhāgavata* is a pure joy. It will always remain an unfulfilled wish that he should create in the Benares Hindu University a chair for the special exposition of the *Bhāgavata* and fill it himself first!

May he live long to help us—is the prayer of one of his great admirers.

BHAGAVAN DAS

THE ONLY PEER OF THE SAGE OF SABARMATI

I regret very much that grave and prolonged illness should have prevented me from attempting an adequate appreciation of Pandit Madan Mohan Malaviya as I was kindly desired to do and as I fully intended to do, almost as a matter of duty. I am still unable to undertake the task if I am to do anything like full justice to it. I would be most sorry if in this Commemoration Volume there is not at least a brief and feeble expression of my immense respect and admiration for and gratitude to one who has commanded my reverence and affection ever since I was honoured with his friendship nearly thirty years ago.

Pandit Madan Mohan Malaviya is nothing but heart from head to foot. Full of the milk of human kindness; charitable in deed certainly, but, what is less common, in judgment, unselfish to a fault, tenacious in adhering to his opinions, sometimes to the point of obstinacy, at the same time with a broad toleration for the opinions and feelings of others, with any amount of respect for age and seniority; with no end of pride in his religion and country; and very sanguine about the future of his race; loyal to friends and forgiving to opponents, Pandit Madan Mohan Malaviya is a model of a Hindu and a Brahmana.

When the project of the Hindu University was mooted, it was thought by many that it will continue to live only in the fertile mind of Panditji; as a result of his incurable optimism and tireless labour it is now a grand and noble fact. I know no other man in the whole country,—and it is my good fortune to know many of India's best men—who could or would have succeeded in translating 'holy madness' into accomplished fact, as Pandit Madan Mohan Malaviya has done. And what greater monument could man wish for than the Hindu University?

Today among India's public men Pandit Madan Mohan

Malaviya's place is second only to that of Mahatma Gandhi, and he is the only man fit to be bracketed with the sage of Sabarmati. Differences of opinion, of outlook, of method, there will be as there have been between the best of men. But who that knows Pandit Madan Mohan Malaviya and his record of continuous and ceaseless public activities of nearly half a century, ennobled by devotion and sanctified by sacrifice, will have the hardihood to withhold from this selfless man and stainless gentleman the high praise that he has richly earned by his *Guna* and *Karma?* The greatest man of the United Provinces for at least a century, it is singular good fortune that Pandit Madan Mohan Malaviya, who has rarely enjoyed robust health, is still hale and hearty and at work in the service of the Motherland, at the age of three score years and ten. India needs her beloved and devoted son for yet many a long year, and on his seventy-first birth day it will be the prayer of millions of his brothers and sisters that God Almighty may leave him with us in health and strength, for many more years.

Malaviyaji ki jai. Vande mataram.

C. Y. CHINTAMANI

THE VALUE OF OPTIMISM

The keynote of the success of the life and career of Pandit Madan Mohan Malaviya has been the sincerity and earnestness of his convictions, fortified by a sense of robust optimism, which has never failed him even in the most unfavourable or adverse circumstances and surroundings. Optimism is at once a source of weakness in some people and strength in others. It may dissuade people from active effort in the hope that events will shape or adjust themselves sooner or later to advantage, and it may stimulate others to action in the belief that energies, rightly directed, can never be wasted. Similarly pessimism may enervate the human will and induce the belief that all action is idle effort or waste of energy, or it may strengthen the determination to the application of greater energy to counteract the forces, working in an adverse direction.

These ideas may appear at first sight to be conflicting, but they are not inconsistent with the varying tendencies and dispositions, associated with human temperament. King Canute thought that he could stem the tide of the waves of the ocean by his behest or the force of his will but failed. Mahmud of Ghazni, fired by his determination to succeed, prayed when his troops were faltering, and eventually took the fortress of Somnath by storm. Optimism engenders determination. Determination reproduces energy. Energy, well directed, leads to success. And yet there are many people who think that nothing succeeds like success, as if success can be achieved without strenuous and persistent effort. The optimism of Prithvi Raj, according to the Prithvi Raj Rasau, led him to release Shahab Uddin Ghori each time he was defeated and captured by his troops on payment of an indemnity, but when he was himself defeated and captured by Shahab Uddin Ghori and taken to Ghazni and asked to be similarly released on payment of any indemnity that may be

demanded from him, he was met with a stern and scornful refusal. Prithviraj was optimistic of success against any forces that might be gathered to invade his territory, but Shahab Uddin Ghori was not, and would not, therefore, allow any advantage gained to be lost on any account whatsoever.

Optimism is often, therefore, a source of weakness in no less a degree than pessimism. Men are apt to become optimistic or pessimistic according to their dispositions, or in another sense, irrational or one-sided through refusing to do full justice to the facts which conflict with the feelings to which their opinions and circumstances incline them.

It may be said that optimism is a species of self-deception. It confounds or distracts the outlook, and induces a man to ignore the facts and realities of his position and surroundings. Pessimism has similarly the effect of aborting or diverting the outlook and disregarding the possibilities of effort, rightly directed to achieve a definite purpose.

The pessimistic outlook is to some extent responsible in India for retarding the material progress of the country. Life is believed to be unending. Only the bodies are changed like the clothes of man, and the millennium is regarded as past, and the world as moving in a downward course to annihilation. There is little, therefore, to stimulate effort to acquire new experiences and to improve the amenities of existence. The West believes in progressive advancement and tries to utilize the opportunities of life for the betterment of the conditions of human existence and the opportunities of enjoyment. The progress of the world is gauged at every step by the benefits which the extension of knowledge and experience confers on worldly existence and the on-ward march thus continues.

The Eastern outlook is pessimistic and unprogressive just as the Western is optimistic and progressive. The one retards progress, the other leads forward. In every country mankind has experienced more or less deeply the pains and

miseries of life and also the vanity and pleasures of existence. But in India, the sense of the pains and miseries of the world has overpowered the sense of the joys and enjoyments of life. The world is regarded as transient and unreal, inspiring thereby a profound pessimism of outlook over the world of present experiences. The people are left, as Bishop Gore says, without a zest for the systematic study of the experiences of the world and are inclined to seek not a redemption of life but a redemption from life itself as a means of escaping from endless existence or repeated births.

The objective must necessarily vary with the outlook. The difficulty of following a pessimistic outlook to its legitimate end has largely flooded India with idle souls, who are ostensibly wedded to the highest religious ideals but are neglecting the opportunities of improving either their existence here or hereafter or helping the advancement of the world by their co-operation and experience.

Optimism has, therefore, a value which is pregnant with potentialities or real and permanent benefits while pessimism is likely to retard the attainment of those benefits and is pregnant with possibilities of potential injury.

Thirty years ago when the idea of starting the Hindu University was mooted, there were many who treated the idea with ridicule, regarding it as utopian and impracticable. Today the Benares Hindu University with its magnificent edifices, colleges and Hostels vivid with life, stands as a living monument of what robust optimism and self-confidence can accomplish. Those who were scoffing at one time, are now joining in a fervent and earnest prayer for the long life and health of the man whose vigorous activities have brought this great achievement into being.

KANHAIYALAL

PANDIT MADAN MOHAN MALAVIYA
THE SUPER-BRAHMIN

In a celebrated passage, verse 41, Chapter XVIII, of the *Bhagvad-Gita*, it has been said that "the duties in the world (*Karma*—it is action arising from the nature fashioned by past thoughts and desires) have been distributed according to the qualities born of their *swabhava* or natures. Tranquility, restraint of senses, penance, purity, forgiveness, straight forwardness, Knowledge theoretical and practical, and theistic turn of mind were natural to the nature and sphere of the Brahmans"[1] To the Hindu mind the world is a dissolving scene in a kaleidoscope, and the individual who strides the stage is pulled by innumerable strings from behind, and is constantly endeavouring to project his ego into the future, moulding and being moulded by the matrix in which he moves and has his being. Accordingly if the complex constituting the human personality—"*swabhava*"—is churned, the quintessential elements that are thrown up are the caste, parentage and the environment Panditji is a Brahman, the son of a learned *sydia* and was nearing his 40th year when the smug enlightenment of the Victorian era had reached its terminus on the death of the Great Queen. The aim of a biography, in the words of Sir Sidney Lee, "is the truthful transmission of personality." I am concerned here with only one facet of a complex personality I leave it to the reader to judge if I have succeeded in capturing these elusive lineaments and fixing them on paper To me this has been an agreeable occupation. I take comfort in the fact that a critic on biographies considers them to be "preoccupation and solace not of certainty but of doubt" Well, I have groped into the labyrinth of his character and come out with certain insights—

[1] शमो दमस्तपः शौचं क्षान्तिरार्जवमेव च ।
ज्ञानं विज्ञानमास्तिक्यं ब्रह्मकर्म स्वभावजम् ॥

some morsels of tendencies which I have presented in the brief pen picture that follows.

"Birth" for him, as for all of us, has been his destiny. *Jñana* and *Tapas* are the twin crests that stand out predominant in the mental get-up of a Brahmin. To possess the giant's strength, but not to use it like a giant. There must be knowledge, but only to be used after purging the self of all its grossness, and as the baser elements are all burnt up in any process of sublimation, *Jñana* perfected by *Tyāga*—self-dedication—carries a Brahmin through the ocean of life, buoyant and triumphant. No doubt the Brahmin loves power, but unlike the monopolists known to history, it has generally not been in his case, harnessed to the acquisition of worldly goods. Viśākha Datta, the author of the *Mudrārākṣasa*, has drawn the picture of the household belongings of Chāṇakya, the Prime-Minister of the Mauryan Emperor, in words indelibly impressing themselves on the reader's memory. "Here lies a small stone to pound cow dung cakes; there are to be seen bunches of *darbha* grass fetched by young scholars; the tenement itself with its dilapidated walls has the edges of its roof hunt down on account of the sacred fuel kept on it for drying."[8]

Ranade called his Chitpawan confrere, one who had the privilege to be intelligent and poor. The Brahmin, like the equally maligned junker, enjoys a privileged position, but it is the privilege of unstinted service, self-imposed poverty and the multiplication of loyalties and intensification of inhibitions that have called for more of sacrifice than gratification of self.

Panditji acquired knowledge according to the standards of that period, but unlike the contemporary English-educated Brahmin lawyers, he looked upon acquisition of

[8] उपलशकलमेतद् भेदकं गोमयानां
पटुभिरकृतदर्भा बर्हिषां लोनहेतोः।
अरणमपि सलीलं शुष्यमाणाग्निधूमैः
शिथिलितशतकान्तं दृश्यते जीर्णकुड्यम्॥

wealth with the lofty scorn of a *yogin*, treating pelf as pille (लोष्टवत्)—like unto a clod of earth. The Snataka period being over the Grihastha's life was gone through without much ado, and an average family of sons and daughters bore witness to the satisfaction of the race instinct. (प्रजातन्तुं मा व्यवच्छेत्सीः—Do not snap the thread of continuity of race) An all round harmonious development in which no part of his nature was starved or repressed, formed the basis of a life devoted to the betterment of his country, his province and his order. He is one of the few survivors of that band of intrepid workers who brought down the Promethean fire, tended it during the alternate fits of enthusiasm and despair through which his co-workers passed, and succeeded in kindling the glow of political consciousness amongst educated Indians who were at that time staggering under the avalanche advance of western culture and western science. His aim was, like the endeavour of his co worker Gokhale, to put India on a level with other self-governing units of the British Commonwealth of Nations. His countrymen were to cease to bear the brand of inferiority, of the feeling of "thus far and no further" that in the picturesque and feeling language of Gokhale "took a cubit off from their moral stature." Like him, his foot was planted firm on the plank of British connection, as ordained by divine ordinance, for the mutual benefit of both the nations. For him the kind of democracy suited to Indian conditions was the democracy of Victorian Great Britain. It was to be "the government of the people for the people," but by the elect and adept amongst them. He, the Brahmin par excellence, has never advocated that wisdom lies in the counting of noses. Knowledge with him is power and the individual must train himself to be the sensitised instrument of a policy of ordered and intelligent conservatism, whereby each group and each individual in that group, may be in a position to work out his own self-realisations without inhibition or distraction, either from the neighbour or society. He recognises no fundamental rights but

duties, though in practice an individual's duties are translated into his neighbour's rights and vice versa This Brahmanic ordering of society—not unlike the hey-day of Christian middle ages—is to be such that each group can put into force Kant's categorical imperative "Behave so that that conduct can be universalised." This involves gradual change and no cataclysmic transformation (*Vyutkranti*) Unlike unhistorical Rousseau he does not believe that every one is born free He is in reality born loaded with the chains of his *karma*. The human endeavour (*Purusa prayatna*) is to be bend to tune the environment so as to give fair scope for the individual to work out, in his orbit, his own self-realisation, i.e., liberation. He is at peace with the world, which transcending the limitation of time and space is "one family to him" (वसुधैव कुटुम्बम्) He is a citizen of the world and like Goethe could say, "If we find a place where we can rest with our belongings, a field to support us, a house to shelter us, have we not a father land" (*ubi bene ibi patria*) The study of English language and literature has made the educated Brahmin a cosmopolitan. Politically he has been attempting to be what spiritually he already had become—a selfrespecting citizen of a well-respected State.

This then is the Brahmin's philosophy of life "Shun not the world" as it has dwelling at its core, Brahma, the *light par excellence*. The wrappings will come off with knowledge That the visible is the sun dial of the invisible, sums up his outlook. In Goethe's words, "Man is formed to look on lit things, not on light" (*Erleuchtetes Zuschauen, nicht das Licht*). It is the exploration of the world around that takes one, doing one's daily duties—to the passage leading to the core. The pleasure however, is in the serene struggle—multiaided and comprehensive, to cross the ocean. Who could sum up this philosophy of calm and contemplative endeavour better than the modern sage who had the wisdom of the Brahmin in him—Goethe? He says —

Ever seeking, fathoming ever,
Rounding off, concluding never,
Mind serene and pure ambition,
Make good fairing in life's mission.

It was in those Brahmanic traditions—spiritual, moral and political—that Panditji of his prime moved and had his being.

For reasons which would be explained farther down he has strayed from his fold But his accents are unintelligible in the other camp and his steadfastness suspect With his one foot still planted on the plank of ordered growth of society and British connection, his other is foundering in a morass, and in balancing himself to preserve his foothold, he has to go through contortions and genuflexions that have been the despair of his friends and provide to his detractors —fortunately few—unholy mirth and a wide surface to serve as target for their darts.

By the nineties of the last century India was spiritually dead Each party was treating the symptoms of the body politic and trying to throw the responsibility on some one else, for the sorry pass the country had come to Mrs Besant and the Theosophists sowed at that time the seed of the tree that was to take under its shade the whole community for their spiritual uplift. Benares was asleep; the traditional sanctity of the holy place and the Divine Ganges was still believed by the average citizen to be quite sufficient to atone for inactivity and sins of omission and commission[1] Panditji raised his trumpet-tongued voice to call off sleep. Mother Ganges (*Sanātana Dharma* personified) may flow wide awake laving the lips of the sleepy masses and prevent them from dying of thirst, but time had come for a change in the orientation of *Sanātana Dharma*. If India is to come into her own again, a new synthesis was to be built up and the new generation was to be stamped with the im-

[1] किं शिवार्कं मांसे, शेषे चाहन्यन्यसंगतो भुङ्क्ते।
अथवा सुप्तं सन्तोषं त्रिकटे जागर्ति जाह्नवी जननी ॥

prism of the new evangel. Just as Wilhelm von Humboldt, viewing with humiliation the prostrate form of Frederick's Prussia after the battle of Jena, saw in the creation of the University of Berlin the one unfailing lever for working the uplift of regeneration of the nation, Panditji wanted the nation to go to school again to be indoctrinated into the tenets of "how to live" and "what to live for" In the *amrita-kumbha* (cf. the conception of the witche's cauldron in the Walpurgisnacht in Goethe's Faust, also the alembics used by alchemists in the Middle Ages) in which he threw India, mangled and disembowelled, he added all the dynamic elements of the *Soma* of western science which give grip to life, and he expected a new synthesis to shoot forth like the cosmic lotus from the navel of Nārāyaṇa. Thus big *amrita-kumbha* is the Banaras Hindu University. Has the magician succeeded? In sketching the scope of the University he laid emphasis on the revival of the Sanskritic lore in its widest comprehension for the rejuvenation of the spirit, and inculcation of western science, so that the refashioned *gnosis* (mind) can ride astride the environment and mould it to its will—instead of remaining the plaything of intractable and inscrutable *tamasic* nature. The university has yet to work out its destiny It is in its swaddling clothes. It stands for the inculcation of the spirit of self help. Society stands together, because each tries to work out his self-realisation on lines which would not inhibit the process of growth for others, and Science has come in as a handmaid to train nature to the glorification of man's estate. Order, with individual development, will be the keynote of the new policy The *homo deliberans* has realised that for his own self realisation he must build up commerce with his neighbour But there is no countenancing of any effort to force differentiated individuality to go back to the undifferentiated mass, of heterogeneity to the homogeneous similarity, of *Ekikāra* triumphing over development of units at different levels If Brahmanic Hinduism does not stand for this, one fails to see what it stands for.

The architect has put up his scaffoldings, the foundations have been laid, but the super-structure, the co-operative effort of the many, has still to be raised. The university, while supplying a spiritual background, will not fail to provide facade which will help in putting the individual at his ease. He will not find in the halls mere space to meditate on, but machines that will multiply his energy hundredfold and help him in making, in the words of Swift, two ears of corn grow where one grew before. This practical side is never absent from the mental get up of Panditji. Sir Rajendra Mookerjee was his colleague on the Industrial Commission and in appraising his work he gave it the place of honour. The Hindu University is the monument of this self-less and dreamy Brahmin. It is his pet child. Beggared in worldly goods—this is his rich possession. Having made the world his kith and kin, this is his favourite child. For it he has played the autocrat and the doting father, and extended his palm in the fine frenzy of begging—which had never known what it was to accept a gift for self. Will it prove the proverbial mustard seed from which a mighty tree would grow that would shelter Hindu society in its travail after perfection? It all depends on a succession of knight-errants being available who will carry on the search after the Holy Grail. The Brahmanic outlook on life is one of calm contemplation of the forces of nature, riding them astride and bending them to your will. In the expressive words of Jeremy Taylor, "the Brahman has a strange evenness and untroubled passage, sliding towards his ocean of God and infinity, with a *certain and silent motion*" and when the curtain falls, बुंद के पट खोल तुझे दर्शन मिलेंगे

Till then the outlook is not obscured by Welt Schmerz (world sorrow or world weariness). There is a joy in the life of Yoga. कर्मसु कौशलम् that is Yoga. "युध्यस्व" is the command. Do your duty कर्म ज्यायो ह्यकर्मणः. In Rauade's words purposeless activity is better than no activity. A regular Mahabharata will have to be fought out to make the Hindu

University approximate to the ideal of its architect Till then Prospero cannot afford to break his staff and call in his spirits.

I have mentioned above that birth has been his destiny He has played up to the highest traditions of the qualities that to the Brahmin are *sadhbirvaja*. Dressed in unostentatious and immaculate white (Robespierre has come down in history as the "ass green incorruptible" and he as "the Pandit en white) with his passions subdued and his form all fire, like Shelley's skylark 'singing still doth soar and soaring ever singeth,' he has never allowed the serenity born of internal harmony, the birthright of his tribe, to be obscured for long by jarring elements outside. To him the words written by Bryce for Sedgwick apply with peculiar appropriateness:—

"In his indifference to wealth and fame and the other familiar objects of human desire, in the almost ascetic simplicity of his daily life, in his pursuit of none but the purest pleasures, in his habit of subjecting all impulses to the law of reason, the well beaded to patience, the soul brought into harmony with the divinely appointed order, he seemed to reproduce one of those philosophers of antiquity who formed a lofty conception of Nature and sought to live in conformity with her precepts. But the gravity of a Stoic was relieved by the humour and vivacity which belonged to his nature, and the severity of a Stoic was softened by the tenderness and sympathy which seemed to grow and expand with every year."

Knowledge chastened by *tapas*, life of action ennobled by *Tyaga*, mental peace secured by establishing harmony with the outside, and policy involving maximisation of liberty for the individual to work out his own salvation—these are the elements from which is forged the "open sesame" to the "cave" of spiritual content Pandit has evolved this formula in order that the future alumnus of the university may not find the world too much for him—"Back" to life he would say with Goethe in a celebrated passage of Wilhelm

Meister wherein on the death of Mignon, they found sorrows falling too thick on them and were throwing up the sponge in despair—Back unto life. There is your *Kurukshetra*.

But the key some times fails its fashioner. He forgets the key word and strives in vain to unlock the treasure house. What causes this fall from the eerie heights of Brahmanic leadership? I shall try to explain if I may. A philosopher has said, "Tout comprendre est tout pardonner"—"To understand is to overlook." Like his good father, he belongs to an age that knew not the movie or the talkie. He is the popular expounder by appropriate declamation and action of the Puranas, an agent that has stolen into the *arcana* of the sacred citadel and brought down the stream of the pauranic lore to the feet of the people. It is his duty to enter into the mental states of his audience and use their intellectual norms to carry his message home to them. The reciter so thoroughly enters into the spirit of his audience that the duality disappears, the two become one and the *Vyasa* is free to play on the whole gamut of feeling of his audience. All the same he never fails to watch, nay hang on their mood,—their tempo. He screws his mind on to them and takes his cue from them. Even the asperities of the narrative have to be softened and naked truth sartorially made presentable, so that it might be acceptable by the audience. Like Bottom he will "roar" like the lion and if need be, "coo" like the gentle dove. His silvery oratory, the richness and allusiveness of its diction, its varietal play of light and shade, is the oratory of the *vyasa* raised to the highest plane. The defects of his oratory, its prolixity, verbosity, lack of the sense of proportion are the defects of the tribe—maladies which Macaulay has rightly characterised as arising from Boswell's disease. That his eloquence moves—no mother's son who has heard him will be able to bear contrary testimony. It sweeps you off your feet. You are saturated with it and you succumb to the charm of the voice, the modulated grace of the manner

and to the *tout ensemble* that goes to the make up of the speaker. Huxley spoke of Gladstone as one on whose tongue the honey bee had worked the miracle when he was born. The *vyasa* in him, sublimated to perfection, has made of him the silver-tongued, dulcet voiced speaker of the masses.

Another result of the *sadhu* habit of entering into the skins of the audience makes him simulate the emotion of the audience. There is nothing hypocritical about it. The action and response are subconscious. If you approach Panditji with a tale of your tribulation, the death of a relative or the ruin of prospects and start weeping, tears will well forth from his eyes. They are not the tears of affectation. His genuinely refined nature is so attuned to world-emotionalism that the response is instantaneous and genuine. You will hear him speak on democracy and equality, and the next moment he will participate in a meeting of the orthodox denying some quite elementary rights to an unemancipated section of the community. He will speak as a nationalist and then preside over a meeting in which some of the worst aspects of Gorakhism are exploited upon by one of the audience. This is not to be mistaken for the hypocrisy of the Pharisee. His critics have called him Pechamithan in his uncertainty. Others have described him as carrying Podsnappism in his knapsack. The criticism is unjust and fails to appreciate the subconscious springs of action or understand the working of a compartmental or one-track mind, when it is engrossed in a subject. His defender might say in the words of Walt Whitman "Do I contradict myself? Very well, I contradict myself: I contain multitudes."

But if the gift of birth, the facile facility to fascinate which sometimes proves inconvenient and embarrassing is disregarded, he stands as a block of granite in the midst of a mass of shale and conglomerate. His beautifully modelled body, every limb tingling with the pulsating harmony within, which has known the impulse without, the prolonged experience of *tapas* (austerities), his loftiness of purpose, that is

the words of Goethe speaking of Schiller, would disdain to think anything that was mean, his varied scholarship that puts him at ease amongst the scholar pilgrims to his shrine of learning, his universality of spirit that makes him a citizen of the world and the least of a chauvinist and anti-foreigner, who that has known this Shankara of the XX century, the *Tyāgamūrti* at its highest, would fail to detect the "*Super-Brahmin*" in him? Like the peak of Kailāsa, he stands, with his seventy winters, a towering spectacle clothed in the effulgence of a mass of white, like the primaeval lotus which nothing can sully, a beacon of hope often, a portent never.

V. N. MEHTA

PANDIT MADAN MOHAN MALAVIYA

An estimate of his personality and work

I feel grateful to the editor of the "Pandit Madan Mohan Malaviya Commemoration Volume" for extending to me the privilege of paying a personal tribute to my revered friend the Pandit. Indeed, he stands for many things which will be dealt with severally by various contributors to this volume. I would like to say something about the personality itself which embodies a lifelong endeavour to secure for this country its legitimate place.

Since I began to take interest in public affairs which, in other words, means since the time I began to read newspapers and Congress news and literature in particular, I became acquainted with the name of Pandit Madan Mohan Malaviya. But I saw him for the first time in December 1897, when I visited the "Indian National Congress" session at Amraoti. He was there pointed out to me as the bright young hope of the Congress movement, and this description of the hope of the Congress exactly tallied also with the personal appearance of the Pandit. Indeed, there were many young and bright looking people who had assembled at Amraoti on this occasion in connection with the Congress, either as delegates or visitors; but the finger of curiosity and admiration turned from all others to this bright young man. For, it was well-known that though young in age he was as much respected and beloved as the most senior Congress leader of the time. Those were the times when the Congress session was an occasion for the exhibition of all that was fashionable or snobbish in point of dress and manner. But when Panditji was pointed out to me, he was wearing a small single "Dhoti" which served the double purpose of the classical dress of the Brahmins, consisting of an upper and a lower garment. For, he was returning from his bath and going to a special cooking place where arrange-

ments were made for the "Chouka" in which he could cook his food with his own hands. Since then, I have not only seen him distinctly at some of the Congress sessions but have later on come into intimate personal contact with him.

In 1908, after the split in the Surat Congress, I was deputed by Mr. Tilak with a watching brief at the "Allahabad Provincial Conference" held under the auspices of the new Congress constitution, drafted at the convention in Surat, after the break-up of the Surat session. My mission at Allahabad was, frankly speaking, that of a political opponent; for, Panditji was counted among the Moderate leaders and had thrown his entire weight with his friend the Honorable Mr. G. K. Gokhale against Mr. Tilak. But he showed me uniform courtesy, though, another man in his place might easily have lost his patience and temper with me and shown me the door. It was at the Delhi Congress of 1918 that I was put in charge of doing the preliminary work for arranging a Congress deputation to England. And I remember his co-operation given to me in seeing the Secretariat officers of the Government of India, while trying to secure passports and passages for what was to be rather a large deputation. I found him, however, personally reluctant to go to England on that occasion, being kept back rather by his orthodoxy and his conservatism in religious matters than anything else.

In 1924 we entered the Legislative Assembly together, he as an Independent Congressman and I as a "Swarajist". We were thus not in the same camp. But in 1927, when I was elected to the Legislative Assembly for the second time, I had ceased to be a member of the Swaraj Party, having founded another Party, viz., the "Party of Responsive Co-operationists". Panditji was the President of the "Nationalist Party" in the Assembly, being a member of its Executive Committee throughout these years, I had occasions personally to come under the charm of his eloquence and oratory. In this he sometimes reached heights, which no other member of the Assembly could aspire to climb. His elo-

quence is like the bubbling stream of spring-water which makes such a sweet silvery sound that one would like to go on hearing it for ever. But apart from his eloquence he always wielded a sort of mysterious influence which was almost inherent in him and this influence was manifest more conspicuously in the arrangements of compromises that had often to be arrived at between the leaders of official and non-official benches on critical occasions, when of course, the tactfulness, but even more so, the trust and confidence reposed by these leaders in one another was put to the real test. In general politics Panditji has been a loyal adherent of the Congress, and it is wonderful to see the steadfastness with which he keeps himself on the side of the Congress, when, otherwise, it was self-evident that he was hopelessly at variance with the dictators of the Congress from time to time. In a personal aspect he shows regard for all the workers in the common cause. But his regard for the Congress surpasses his regard for any individual leader of it. Curiously enough, he trusts both the Government and people at the same time to do what is right for and in the interest of the country! And in a mood of almost unconquerable hopefulness he has been giving his best as a political worker to all patriotic causes without fear or favour.

On the background of the popular mind, however, the Pandit figures and looms large more as a typical Hindu leader than as a politician. Surrounded by a deluge of foreign culture, both European and Mahomedan, Panditji has not allowed the sand to shift from under his feet. On the contrary, he has proved almost an aggressive champion of Hindu religion and culture. He hurriedly retires in his shell at the least touch of anything that makes for profanation of his body and soul as a Hindu. But he is prepared to extend toleration to all those that differ from him and follow other religions.

Personally I attach greater importance to the work which Panditji did to the cause of his religion and society than to that of pure politics. There are others who have

shown themselves to possess greater grit and capacity for unpleasantness than the Pandit. His politics has not ordinarily taken an aggressive form and he has contented himself more or less with a defensive attitude in political strife. He has led no definite party as a political leader, and though even he could not possibly be all things to all men, yet he made himself useful in arriving at many a compromise which is said to be the essence of practical as opposed to theoretical politics. I may even go further and say that the very fact that he wielded influence with high political officials was misunderstood in many quarters, though his moderation appertained more to his temperament than to his intellect. Further the bitterest of his opponents or enemies could never allege that his moderation was as is undoubtedly the case in so many Moderates, actuated by any selfish ulterior motives. Throughout his life he has proved himself extremely unselfish as an individual, and the comparative assistance which Government gave him was only in the matter of facilities for the work of public service in his hand which perhaps they might not have given to a more unpleasant, bitter and avowed political agitator. The result of all this is that though he is a political idealist of the first grade his political work could not outshine his work in other departments.

And that leads one to the work he did in connection with the "Hindu Maha Sabha" in its earlier stages and in connection with the renaissance of Hindu culture and learning in all its aspects in the province in which, though the Hindus are preponderatingly in a majority, they were curiously enough over-powered and dazed into self forgetfulness by the oppressive fragrance or aroma of Muslim culture. He looks at Hindu renaissance in all aspects and in all its details without being averse to assimilate the light and spirit of the new scientific age. He has done all that was in his power either to rehabilitate or to consolidate the fragments of Hindu culture that were not yet all lost. He has an all-pervading blessing to bestow upon every institution and individual endeavour that makes for the assertion of Hindu

life and culture in its pristine purity. His moderation in accepting new ideas of world-culture exactly corresponds with his moderation in politics. For, both are meant to save the Society from sudden revolutions or cataclysms and leave social life at the mercy of winds that blow from any quarter. Whenever I have an occasion to name a prominent typical Hindu, I name no other than Pandit Madan Mohan Malaviya. For, he alone is so eminent in public life, that I can unmistakably point my finger to a visible combination of all the points of strength, and perhaps also of inconsistency, which make up the typical Hindu of the present times. Panditji himself cannot deny that he is evolving, for notwithstanding his invincible resolve not to pollute himself by eating or drinking at the hands of any man that does not belong to his own small social sect, he has reconciled himself to the free and unstinted admission of the depressed classes to all benefits in public affairs and public places. His views on female education and things of that kind are remarkably broad, and whenever I hear him addressing ladies as "Devis", I feel that he means fully all that is conveyed in that beautiful expression. Nobody can make a mistake about his not being a faddist "Ahimsa Wadi" and his views about physical culture and rights of self-defence are as broad as they are invigorating. Perhaps, he may have to take a back bench as a social reformer in an advanced province like Maharashtra, but I think, he must be regarded as decidedly progressive and advanced enough to give the proper lead to a society, so specially conservative in socio-religious customs and yet so dominated by Urdu culture.

And it is this love of Panditji for Hindusim that inspired him with the idea of a Hindu University. And the work for that University, which of course is his *magnum opus*, has brought out some of his other qualities which might have otherwise remained undiscovered. His powers of organisation and persuasion had indeed their own use in Congress Politics; but it was only in the work of the collection of funds for the Hindu University that these powers were put

to their highest test. For, it is much easier to persuade an unreasonable friend or opponent to accommodate himself to formulas expressive of political opinion, with a change of word here and a change of word there, than to make even very wealthy men loosen the strings of their purse and to pay out huge sums of money for a public cause. Till Mahatma Gandhi came on the scene it was Panditji who exclusively enjoyed the reputation of the "Prince of beggars". Hundreds of people before him might have talked glibly about the need of a centre of Hindu culture and learning like the Benares University, and hundreds might have sat down, if called upon, to draft schemes for a University. But Panditji alone possessed the almost super-human steadfastness of purpose, once he got the idea into his head, and also the super human energy to move and travel and complete the work of collecting more than a crore of rupees for bringing the University into being. Perhaps, the difference between the collections made by Mahatma Gandhi and those made by Panditji may be stated to be this, that much of Mahatmaji's work was accomplished by vicarious canvassing, while not a single pie of Panditji's collections was promised without his own personal endeavour, though of course, Panditji's scale and unit had to be fixed at a very high degree. If Mahatma Gandhi tapped the middle and the lower classes of population, Panditji invariably tapped Princes and potentates. His work, though it may look easy from one point of view, was difficult from another. Mahatma Gandhi's contributors may be poor, but they were willing donors and felt happy to be enlisted, whereas, Panditji's contributors, though they were used to sign away cheques like fun, could not be said to be very willing contributors, and must have caused an amount of worry and trouble to Panditji to induce them to make up their minds to pay. I mean no affront to them, when I say that few of the Princes who contributed to the funds of the Benares Hindu University could personally have the true perception or realisation of the inward meaning, and the grandeur of the idea of a Hindu

University. The point is that, this being so, Panditji must have been taxed to his utmost in his resources as a canvasser

The successful work which the Pandit has done in connection with the Benares University would certainly entitle him to be called a Prince among men. For it is only Princes that can achieve such a financially stupendous task. Mysore and Hyderabad could have their Universities without much difficulty, because the idea in each case was readily and solidly backed by the financial resources of a rich state But with his almost super-human strength of will and hopefulness Panditji brought under requisition the funds of several Indian Princes as if they were his own. I very well remember the genesis of the Benares University I remember with what lively wonderment and gratitude we received the news that a wealthy Rais of Benares, Munshi Madhav Lal, donated a sum of three lakhs of rupees for the purpose of founding an Institution of National Education. The idea of National Education was a living force just at the time It materialised on this side in the "Samarth Vidyalaya" founded by Messrs. Tilak, Deshmukh, Vaidya and Vijaparkar. And some other gentlemen, one among whom was, I believe, the late Prof. C. G Bhanu, declared their resolve to devote their future years of life to join an institution of National Education if one was started at Benares. But no one thought at the time that the little seed sown at the time would assume such vast proportions in course of time. During Lord Curzon's regime an impetuous was given to the reform of higher education through the Universities. That Viceroy had, no doubt, big ideas, though he believed in nothing but the official agency to make those ideas bear a rich fruit His University Act met with a mixed reception, but credit may be given to him for making the first move towards a reformed University. He was no doubt responsible for giving stimulus to private liberality towards the cause of education Whether it was due to him or not, the Raja of Nabha called upon the Sikh community at this time to reform the Khalsa College at Amritsar. In Bengal there were handsome gifts

given for the new College at Ranchi. The Aligarh College Trustees began to think of turning their College into a residential University with "real Professors, real Lecturers, living curriculum and a definite aim". The idea of a sectarian Educational Institution was being deliberately fostered not only by the leaders of the Mahommedan community, but was also receiving the inspiring blessings of British Officials in high quarters. Lord Curzon paid a visit to the College and expressed an insinuating hope that the Mahommedans of this country, Sunni and Shia alike, would exert themselves not to be left at the starting point, while their many rivals were pressing forward in the race. A record subscription was achieved in 1904 for the Aligarh College in a conference at Lucknow. Sir J. La Touche was making similar efforts in other directions. The College at Barsh was improved at this time, with the aid of the Nabab of Rampur. The Maharaja of Balrampur gave a donation of three lakh towards a site for a new residential College. And last but not least, Mr. Tata's Institute of Science was slowly emerging into being. I wonder whether the idea of the Benares University was developed under the contagious influence of this general movement of the reform of education, but whether it was so or not, the Benares University, as we now see it, has surpassed the wildest expectations that may have been formed at its inception.

Lord Curzon lectured glibly to Indian Universities about the need of their reform, but instead of setting the example of instituting Professorships and Lecturerships out of Government endowments or grants specially given to the different Universities for this purpose, he contented himself with a scheme of dry-nursing of Colleges which were suspected to be on the high road to become centres of sedition and which therefore, he proposed to get effectively supervised and disciplined at the hands of second rate or third rate administrative educational officers. There was thus no possibility of doing any good to the cause of higher education by the Universities or colleges by merely co-operating with Government

And if a radical step was to be taken, why should it not take the form of founding an independent University itself? We first heard in November 1905 that Pandit Madan Mohan Malaviya had decided to give up his large legal practice and throw himself into the work of founding an independent National University. It was almost on the new Year's day in 1906 that the establishment of a "Hindu University" at Benares was announced in the Congress Pandal. On the previous day a select gathering of prominent representatives of different provinces had assembled in the Benares Town Hall under the chairmanship of Mr. V. N. Mahajani, M.A., of Berar, where Panditji explained at length his scheme, embodied by him already in a special pamphlet, and the scheme received ready acceptance at the hands of those present. The scheme had distinctly a modern outlook, and though on the one hand Panditji was appealing to the "Bharat Dharma Maha Mandal" and other similar religious bodies to come to the rescue of *Sanatan Dharma* through the new University, and though Panditji was supposed to intend to carry out a scheme of Sanskrit studies proposed in the Sanskrit department of the Queen's College at Benares by Mr. John Duncan in 1791, still on the other hand, he had given well-deserved prominence to secular, and more particularly, scientific and industrial studies. To quote Panditji's own words, he recognized in that pamphlet that "The advance made in Europe and America during the last three quarters of a century in Physics and Chemistry and in their application to the production of wealth, more especially, to steam and electricity as aids to manufacturing industries and as means of locomotion, has thrown India far behind the countries in which experimental sciences are studied and made serviceable to social well-being."

Looking back at the scheme of the "Benares Hindu University" as promulgated in 1905, it appears that some of the ideas adumbrated have not materialised. Some of these might have been discarded by experience, but some others need not yet be regarded as hopelessly impracticable.

I do not know whether there is in the University the proposed "*Brahmacharya Ashram*" to which students were to be admitted directly after their "*Upanayana*" Further, I believe that sufficient importance does not seem to have yet been given to the use of Indian vernaculars, preferably of course the Hindi, as medium of Collegiate instruction Perhaps, the idea of an Agricultural College has not yet taken sufficient shape. The teaching of music and fine arts with a National purpose does not seem to be making much headway But the scheme seems to have been realised in a very full measure, so far as Chemical, Industrial, Engineering, and Mining studies are concerned.

The original idea of having a really independent University could not be carried out, for, the University could not have been stabilized without a Legislative Act to support it. With the acceptance of a Government grant the supervision of Government Educational Department could not be avoided, though, I for one, would at any time welcome Government audit even if there were no grant, or subsidy, judging by the light that was thrown upon the affairs of the Aligarh University. In the first Non co-operation movement Panditji resisted all attempts at the boycott of University education by personally joining battle with Mahatma Gandhi. But in the last movement of Satyagraha Panditji's attitude was different, and he was even prepared to surrender the Government grant to the University, if necessary. A National policy in all its manifestations is being gradually developed at the University along with the necessary *esprit de corps*, and the Benares University has already proved in its own case, *mutatis-mutandis*, the adage "When Oxford draws the knife England is soon at strife"

Now that Panditji has gone to England, he is sure to extend his tour after the R. T. Conference to the different European countries and perhaps also to America and Japan to study matters of higher education And let the Indian Princes and millionaires beware, for, directly on his return

he will come out with his golden beggar's bowl in which contributions will have to be put in not by thousands but by lakhs. Panditji is a notorious spend-thrift when money for educational reform is concerned. He is fond even of making commitments is anticipation. But his faith in 'the God in the Machine' to come to his rescue at the proper moment has never failed him.

1—9—1931

N. C. KELKAR

A CLASS-FELLOW'S TRIBUTE

Ill health has prevented my making a contribution to the Volume which is being presented to my dear and esteemed friend Pandit Madan Mohan Malaviya on the occasion of his attaining the respectable age of seventy years But I cannot allow this occasion to pass without offering him my cordial congratulations and expressing my sincere admiration for the many qualities of head and heart with which his extraordinary personality has been gifted

As an old class-fellow of his I can bear testimony to the fact that the germs of greatness and love of service which in later years have borne such fruit in such abundant measure, were distinctly discernible in him even as a boy I can well remember how we, fellow students of his, used to notice with wonder, not unmixed with juvenile amusement, how he, planting himself on a stool in the midst of the Magha-Mela on the banks at the Tavani in Prayag, would preach to the crowds of pilgrims assembled there Selfless service of his fellow men has been the dominant note of his life. When he entered the legal profession he, with his brilliant intellect and rare powers of eloquence, had the bell at his feet, and it does not need much insight to see that he might have easily climbed to the highest rung of the ladder if he had only chosen to give his whole attention and energy to the profession But he sacrificed the glowing prospects of the profession to the supreme passion of his life,—service of his fellow beings.

Diverse are the fields in which he has worked and worked with remarkable success, and numerous are the achievements that testify to the labour of his love, but in my humble opinion the crowning glory of his life has been the building up of the great University in which I have had the privilege of being associated with him, in however humble a capacity. It would therefore have been an act of cri-

minal neglect if I had failed to send even from my sick-bed my humble tribute to the greatness of one who was a striking colleague in the morning of life and is still a venerated colleague in its evening. May he live for many more years to continue his beneficient work.

G. N. CHAKRVARTI

PANDIT MADAN MOHAN MALAVIYA

An appreciation

When the history of India of modern times comes to be written, Pandit Madan Mohan Malaviya will occupy in it a large, important and honourable place. As the founder of the Banaras Hindu University his name has become imperishable. As a politician who has served the country for well-nigh half a century with singular devotion and rare self-sacrifice, remarkable eloquence and uncommon pertinacity, he has established his claim to the admiration of his grateful countrymen. The Hindu community is under a special obligation to him, for according to his lights, capacities and opportunities he has done for it all that is humanly possible. It may be permissible to differ from some of his views and methods, but it is impossible to withhold respect for his loftiness of motive and singleness of purpose. His achievements are great, his endeavours have been greater, but greater than everything else is his all-consuming passion for service to India. Without exaggeration it may be said that Malaviyaji during his waking moments lives for India and if during sleep he has dreams, they must be about India. India fills his whole being, her love is his inspiration and her service is the only object of his life. There may, perhaps, be abler and more brilliant Indians, but none can be more faithful, self-sacrificing and devoted than he.

Malaviyaji has impoverished himself for the sake of the Motherland. He would have been a rich man had he chosen to amass wealth. Joyously he gave up a growing practice at the bar and deliberately set his face against the allurements and prizes of the legal profession. He has a large family, and from the average man's point of view his responsibilities are heavy. But his love for India is greater than his love for his wife and children. For him his duty to India is supreme.

His visit to England to attend the Round Table Conference is to my mind the greatest evidence of his patriotism. Only those who know the nature of his orthodoxy can form an estimate of the sacrifice involved in crossing the ocean and going to a foreign land at the age of seventy. In these days orthodoxy is fast losing its hold over English educated Hindus, but Malaviyaji's orthodoxy is sincere and deep-rooted, rigid and unbending. For some orthodoxy is a pose, for others it is a device to gain popularity and for the vast majority it is the surest way of avoiding conflict with people round about, but with Malaviyaji it is a matter of deep sentiment. He lives and moves in the atmosphere of orthodoxy and its breach means for him indescribable anguish. But for the sake of his country at his advanced age he has laid aside his cherished feelings. Along with this act of supreme sacrifice he took a serious physical risk in going to England and facing the rigorous of the English winter. In jail his health had been shattered and long after his release he continued to be ill and feeble. It was in this state of health that he had to leave for England. When he and I were going to a farewell function in the MacDonnell Hindu Boarding House at Allahabad, an imposing, two-storeyed building which accommodates over two hundred students, another institution founded by him,—I asked him how he was. He replied—we were talking in Hindi—"I have fallen into a ditch and I am unable to get out of it. But that body has been given by the country and what does it matter, if in its service, it dies in India or in England."

All over the country Malaviyaji's public life is an object of love and adoration, but there is one misconception which I shall try to remove, if I can. On the Hindu-Mohammadan question he and I are not in perfect agreement but I can truthfully assert that he is by no means anti-Mohammadan, as in certain quarters he is supposed to be. I have had innumerable talks with him on this question, but never has he betrayed even in private any trace of hostility to the Muslim community. By nature he is averse to wrong

or injustice and he is loath to hurt even a fly, much less a human being or community. He desires to be just to Mohammadans, but unlike Mahatma Gandhi, he is not prepared to give them all that they want. He would be just and even a little generous to Mohammadans, but not over generous. He believes, I imagine, that the settlement of the Hindu-Mohammadan problem based on justice alone will be enduring, a compromise, I suspect, brought about by over-generosity on the part of Hindus alone does not appeal to him. Whether his views are right or wrong is a different matter, but to me it appears that to stigmatise him as anti-Mohammadan is to do him a great wrong. It is no doubt true that his first thoughts go to Hindus and Hindustan. If these facts and his upbringing and associations are kept in view, his attitude towards the Muslim community becomes thoroughly intelligible.

As an educationist, politician, patriot and worker in the domain of religion, Pandit Madan Mohan Malaviya is well known all over the country, and his achievements in various spheres of our political activity are public property. But I wish to say a few brief words about the man as he is known to those who have the privilege of having come into intimate personal relations with him. I claim this privilege and it is therefore that I am undertaking this task.

It was in the early nineties that I first made Malaviyaji's acquaintance, and I have known him closely ever since. In spite of strong differences of opinion over certain matters, never has a cloud been cast over our friendship. No one is more tolerant than Malaviyaji. Sometimes his tolerance is mistaken by ignorant critics for weakness. His orthodoxy is well recognised, but he has many friends who are thoroughly unorthodox and iconoclastic in their views as well as actions. This divergence affects neither his private or personal relations nor his public co-operation.

It was in the second Legislative Assembly that the Sarda Bill, at one of its stages, came up for discussion. The late lamented Lala Lajpat Rai was the leader and I, a member of the

Nationalist Party of which Malaviyaji was the real founder. Malaviyaji held strong views in regard to this Bill, and Lala Lajpat Rai and I held equally strong views on the other side. Malaviyaji made an eloquent speech and Lala Lajpat Rai insisted that I should take part in the debate. I followed Malaviyaji and offered uncompromising opposition to his position. After my speech the House rose for lunch and Malaviyaji and I began to discuss with usual cordiality the pros and cons of the Bill itself. I am sure he did not agree with my speech, but that produced not the slightest effect on him.

While we were talking, one of the supporters of the Bill came and intervened in the conversation. Apparently he was excited and began to criticise Malaviyaji personally. Malaviyaji defended himself, but when he found that the irate M.L.A. was about to become unpleasant, he quietly said, "I did not begin this conversation" and turned towards me. Malaviyaji is gentleness itself. He is the last man to utter a harsh or unkind word. He would much rather suffer himself than cause pain to anybody else. This solicitude for the feelings of others sometimes makes it difficult for him to adopt stern measures as an administrator or disciplinarian.

He is the fine type of a true Hindu gentleman. Pride is foreign to his nature, and his good manners are not reserved for the rich, the influential or the powerful. When he was at the Bar he and I for some time had our respective offices in the same house and thus he came to know my clerk. Once he invited me on the occasion of some festival to dinner. When I arrived at his house he asked me when my clerk would come. I told him that he had not been asked and Malaviyaji felt terribly disappointed. He had intended to invite him also, but forgot to do so. Twice he expressed his disappointment to me and, when he came to the office the next day, he profusely apologised to my clerk.

I shall never forget another touching incident. Malaviyaji has two houses at Allahabad, one in the city and the other in what might be called the Civil Lines. Plague had

broken out and the city was practically deserted by all those who could afford to do so. Malaviyaji had to take out certain papers from the house in the city and I went with him. The street in which his house is situate was utterly desolate, and in the house adjoining his own there was an old woman sitting at the door. The poor unfortunate creature had been left by the owners to look after the house. Malaviyaji greeted her as aunt—a term of courtesy, she was of another caste—and made inquiries about her with kindness bordering on affection.

In his younger days I have seen him talking to elderly men with folded hands. He is courteous, kind and considerate beyond description. There is no pose about him. Everything that he does is perfectly genuine and sincere. He is ever ready to give credit to others for honesty. He may disagree with one's views, but it is difficult for him to question any one's motives. This generosity sometimes makes his judgment about men faulty. His estimate is more generous than just.

Malaviyaji's devotion to his family is touching and whenever he can spare a few minutes,—it is rarely that he is able to do so—he surrounds himself with his children and feels perfectly happy. But after a few minutes of pure fun and laughter he deliberately restrains himself and resumes his serious work for the country. Domestic joys and sorrows cannot separate him from his public activities for long. In this connection a most pathetic incident comes to my mind. Malaviyaji had a grown-up daughter of whom he was very fond. She died of phthisis and I went to see him. His eyes were full of tears but after a moment he turned round to me and said, "Well, she is gone. But what about thousands of other girls who become victims of this disease and are so poor as not to afford even decent food and ordinary treatment? We should have sanitoriums for these unfortunate people all over the country." If I am not mistaken, he left home for the Benares Hindu University the next day. Truly he leads a dedicated life.

No one would dream of calling Malaviyaji a social reformer in the ordinary acceptation of the term. But he does not believe in Purdah. His wife, a venerable old lady, presides over public meetings and with flag in hand has marched at the head of processions during the days of civil disobedience. The other ladies of his family also attend public meetings but there is nothing outlandish about them. There are two ways of getting rid of Purdah, one the Indian and the other the Western. As would be expected, the ladies of his family under his inspiration have preferred the former. I have seen him encouraging his grand-daughters to sing and to play on musical instruments. Malaviyaji is definitely in favour of the uplift of our women. There was, many years ago, a prize distribution at the Kayastha Pathshala at Allahabad where he and I had both gone. It was presided over by an English Judge of the Allahabad High Court, who was accompanied by his unmarried young daughter, who looked the very picture of health and strength. At the close of the meeting Malaviyaji turned to me and said "Did you notice anything?". I replied that I was myself thinking of that matter. He exclaimed, "When shall we have such girls in our country?".

He is extremely loyal to his friends. In the old Supreme Legislative Council the late lamented Mr. Gokhale and Malaviyaji took opposite views in regard to a certain Bill. While Mr. Gokhale was harshly criticized in the public press for his attitude and even insinuations were made against his courage, Malaviyaji was praised and held up to admiration for his bravery and fearlessness. While this Bill was under consideration, Malaviyaji and I met by chance in a railway train. He felt unspeakably sad and dejected. He said to me "Gokhale is a coward and I am a brave man. This is what they say. Oh! the agony of it all. It is heart-breaking. I wish I could be with him. But my convictions make it impossible. I would break off my sacred thread if I went against them". He was greatly moved and keenly felt the criticism against his friend.

I am reminded of another incident in connection with Mr Gokhale. Malaviyaji one day saw Lord Minto and without consulting any one, invited him to open a park to be named after the Viceroy on the banks of the Jamuna at Allahabad. Lord Minto agreed. The moment Mr. Gokhale heard of it he said to Malaviyaji, "Panditji what have you done? You have no money and you have got the Viceroy fix a date for the opening of the park. There is not much time left now. Pray leave the Council (the Supreme Council was in session) and go and collect the money. If the money is not found in time and you are disgraced, we shall all be disgraced". He showed the anxiety of a true friend and Malaviyaji fully appreciated it but he said with a smile "Thank you. Pray don't bother. The money will come and for the sake of this subscription I will visit no place. Letters will bring the money". He went nowhere, money came in time in response to his letters and the foundation was laid on the fixed day. His successes have increased his optimism.

His sweetness and gentleness will captivate any heart. If one stays with him he will put himself to no end of trouble and bother in making his guest feel perfectly comfortable and at home. Every one is welcome at all hours of the day and night. Even when he is ill and the doctors have issued an injunction that no one should see him he will insist on receiving anyone who calls on him. It was in my presence at the Vice-Chancellor's Lodge at Benares that one of his sons complained of visitors of all kinds coming into the room uninvited, and sometimes even reading letters lying on the table. Malaviyaji quietly whispered that the poor fellows knew no better, but all the same meant no harm. His son, full of youth and spirit told him that he was going to stop it. Straight came the remark, gentle but firm. "As long as I occupy this house these poor people will come without let or hindrance".

This regard for the feeling of others is one of the crux of Malaviyaji's unpunctuality. I have seen him getting ready

for an appointment and some one drops in, either for business or simply to have his *darshan*. He gives a gentle and sometimes a broad hint to him to depart, but if the visitor is obtuse or persistent, then Malaviyaji is at his mercy. In the goodness of his heart he cannot send him away. Another cause is his incurable optimism. By a strange mental process he convinces himself that he will be able to do in fifteen minutes what any other man would take an hour to accomplish. He had gone to Gorakhpur and had to catch a train. We started for the railway station and a poor relation of his was living on the way. In spite of my remonstrance he went to her house, took his meal and rushed to the railway station to jump in to the moving train. From the compartment he smilingly said to me "I was after all right. I have caught the train and I had my meal!" Once he started from the place where he and the late lamented Sir Sundar Lal were staying to catch a train full one hour after the scheduled time. Sir Sundar Lal dissuaded him but without success. Malaviyaji would go. He said, "Panditji, don't worry, trains are sometimes late. The train may be late." He went and caught the train. It was about two and a half hours late. In the old Supreme Council he had to move a resolution and the Viceroy was going up from Calcutta to preside over the meeting. Malaviyaji was late and the last train had gone when he came to the railway station. But he waited at the platform and got into the Viceroy's special train.

Malaviyaji is fond of music but can seldom, if ever, spare time for it. Often and often he has told me that he would greatly improve in health if he could listen to good music for half an hour every day. He has no hobbies and there is no relaxation for him. With no social engagements and late hours and with his purity and simplicity of life he can still retain his vitality for a good many years, provided he can make up his mind to take rest during the week-ends. He has not learnt how to give himself peace. His over-earnestness perhaps is responsible for it.

He is extremely charitable, no one can appeal to him for help in vain. We were once coming down from Naini Tal and the tonga stopped on the way for the horses to take rest. Out of the Khud there sprang a man with fruits and flowers in his hands and chanted some Sanskrit slokas. Malaviyaji with folded hands offered him two rupees, while most English educated men have paid no attention to a man who, if one could judge by appearance, was a professional beggar. When he was at the bar he himself was a junior and still he tried his utmost to help as far as he could those who were less fortunate than he was.

Malaviyaji's public life is magnificent but his private life is still more magnificent. His purity and nobility, his simplicity and humility, his gentleness and affability, his courtesy and hospitality—have endeared him to all those who have the good fortune of coming into contact with him. It is the bare truth that he has hardly made any enemies. Even those who differ from him on public questions bear testimony to his private virtues and love and respect him for his self-sacrifice and devotion to the cause of the country. If a purely moral issue were to be decided I would feel unhappy if I had to differ from him. We acknowledge the ability and the diplomacy of other public men but to no one, barring Mahatma Gandhi, our hearts go in the same way as they go to Malaviyaji. It is my unalienable faith that so long as India continues to produce men like Gandhiji and Malaviyaji, so long will India continue to live and banish pessimism.

May Malaviyaji live long to see the freedom of his motherland! May it be his good Karma to see the fruition of his cherished hopes and the realisation of his fond and life-long dream!

ISWAR SARAN

विश्वविद्यालय का सूत्रपात

सन् १९१० के दिसम्बर मास में प्रयाग में बड़ी भीड़-भाड़ हो रही थी। एक ओर तो विलियम बेडरबर्न की अध्यक्षता में कांग्रेस की बैठक हो रही थी और दूसरी ओर उसी के साथ सरकारी सहयोग में बृहत् स्वदेशी प्रदर्शनी हो रही थी। प्रान्तीय सरकार का लक्ष्य था कि सन् १९०४ की बम्बई की और सन् १९०६ की कलकत्ता की प्रदर्शनियों को सीधा दिखाया जाये पर, वास्तव में, कुछ लक्ष्य दूसरा हो गया। एक मास के लगभग प्रयाग में रहकर भी मैंने अपने वर्ग समय के विचार के अनुसार इस प्रदर्शनी को नहीं देखा। इस कारण इस पर कुछ लिखना अनधिकारचेष्टा होगी।

इसी वर्ष मैं पढ़ना छोड़कर बी० ए० में होता हुआ भी परीक्षा में नहीं बैठा। घर में मेरे लिए कोई काम नहीं था। समय, उत्साह और स्वास्थ्य की कमी न थी। पूज्यवर सालगरामजी महाराज से अभिन्नता हो गई थी। मैंने उन्हें 'बाबू' पुकारना आरम्भ कर दिया था और उन्होंने भी पिता के सदृश प्रेम और शिक्षा आरम्भ कर दी थी। किन्तु इतना होते हुए भी बाबू के उदार राजनैतिक विचार से हम बालक लोग सहमत न थे और उनसे इस सम्बन्ध में प्रायः वाद-विवाद हो जाया करता था। वे बड़े प्रेम से समझाने का यत्न करते थे पर मेरी उस समय गदहपचीसी थी। बात क्या समझ में आती। परन्तु।

वह वह समय था जब हिन्दू-कालेज के दृष्टियों में 'कृष्णमूर्ति' की बात लेकर आपस में वैमनस्य की नींव पड़ चुकी थी। हिन्दू-विश्वविद्यालय की चर्चा सन् १९०४-०५ में उठकर एक प्रकार शान्त हो चुकी थी और १९०६ में काशीधाम में मुस्लिम यूनिवर्सिटी की चर्चा का आरम्भ होकर

विचार स्वरूप धा चुका था। 'गुरु गुड़ही रहे और चेला शकर हो गये' की कहावत इस सम्बन्ध में चरितार्थ हो चुकी थी। इसी समय हिन्दू-विश्वविद्यालय की चर्चा फिर उठ खड़ी हुई।

सिद्धान्तों को लेकर प्रस्ताव फिर उपस्थित हुआ। ऐसी विशेष ऐसी बादशाही थी कि बादशाह का चार्टर लेकर एक सार्वभौमिक भारतीय विश्वविद्यालय काशी में खोला जाये जिसके अन्तर्गत देश के सब प्रान्तों के कालेज रह सकें और सब जगह पढ़ाई की परीक्षा का केन्द्र बन सके। पर इस विचार का अन्त भी एक प्रकार से हो चुका था और उन्हें इस प्रयत्न में सफलता की आशा मिट चुकी थी। इसी अवसर पर मालवीयजी महाराज ने हि० वि० वि० का नया विचार नये रूप में फिर से उपस्थित किया। प्रयाग में स्वतः इसकी प्रथम बैठक हुई। स्वर्गीय परलोकवासी श्री पण्डित सुन्दरलालजी से इस नई संस्था के लिये चिन्तनी की गई। उनके पैरों पर उन्हें मालवीयजी की बगली तक डाली गई पर उन्होंने हर प्रकार की सहायता का वचन देते हुए भी, और हर तरह से सहायता देते हुए भी, जब तक सरकार का रुख स्पष्ट न हो जाये तब तक खुल कर स्पष्टरूप में सम्मिलित आह्वान करने से इनकार ही कर दिया। कुछ उपाय न देख पूज्य बाबू ने अपने पैरों पर खड़े होने की विचारा और कलम से के लिए प्रस्ताव कर दिया। मैं भी बलस्तू के चूल्हे की तरह बेकार होने के कारण उनके साथ हो लिया। कलकत्ता पहुँच कर बाबू तो हरिसन रोड पर श्री० पं० सुन्दरलाल सारस्वत के गृह पर उतरे और मैं अपनी कोठी श्रीशोभा-प्रसाद सहगलप्रसाद, ३०, बरतला गली में जा उतरा। पूज्य मालवीयजी ने प्रचार आरम्भ कर दिया। परलोकवासी मेरे अत्यन्त प्रियवर कमल में छोटे बच्चा श्री रामलालप्रसाद एम० ए० की परीक्षा की तैयारी कर रहे थे या स्वतः परीक्षा दे चुके थे। उनके तथा श्री गोकुलचन्द के और उनसे और मुझसे भी थोड़ा बड़े थे, प्रयत्न और उत्साह से मेरी कोठी में इस कार्य में सहायता देना स्वीकार कर लिया। कलकत्ता नगर के बड़े बड़े महाजनों, साहूकारों और जनता ने भी दिल खोलकर इस कार्य में

धन और जन से सहयोग दिया। स्वनामधन्य वर्तमान बीकानेर-नरेश ने भी इस सम्बन्ध में बड़ी सहायता का वचन दिया और गाड़ी चल निकली। इसी अवसर पर कोहानकोर्ट बटलर जो उस समय बड़े लाट के शिक्षामन्त्री थे, मालवीयजी महाराज से मिले और इससे बहुत ला बातें कीं। आपने पहले ही कह दिया कि यदि पर्याप्त संख्या में मातृभाषा द्वारा पढ़ाने की व्यवस्था रहे तो उसमें सरकारी सहायता और सहानुभूति की आशा रखना व्यर्थ है। उन्होंने साफ़ साफ़ कह दिया कि जिस समय तक आप अँगरेज़ी भाषा में लिखते, बोलते, पढ़ते, पढ़ाते हैं तब तक तो हमें शान्ति रहती है, क्योंकि उस समय तक हम आपकी सब बातों और चालों को भली भाँति समझ सकते हैं और उसे सँभाल सकते हैं, पर जिस समय आप अपनी भाषा में कार्य करना आरम्भ कर देते हैं तब उसका समझना हमारे लिए कठिन हो जाता है। इस कारण मातृभाषा-द्वारा उच्च शिक्षा देने की अनुमति सरकार से किसी अवस्था में नहीं मिल सकती। न जाने क्या विचार करके कुछ मित्रों के विरोध रहते हुए भी बाबू ने ओटलर का इशारा समझ कर इस बात को स्वीकार कर लिया और मातृभाषा-द्वारा शिक्षा देने का विचार एक प्रकार से छोड़ दिया या यह कहिए कि कुछ दिनों के लिए स्थगित कर दिया।

इसी समय श्रीमती ऐनी बिसेन्ट देवी के भी ५ व्याख्यान भारतीय विश्वविद्यालय के सम्बन्ध में कलकत्ते में हुए। इनके उपलक्ष्य में एक सार्वजनिक सभा में वि० वि० की योजना की गई। कलकत्ते में जो आर्थिक सहायता का वचन मिला था वह प्रकट किया गया और लग. ५ लाख का वचन मिला और धन भी कुछ मिला। हमारी गाड़ी आगे चलती। मौरीपुर के जमींदार श्रीब्रजेन्द्रनाथ किशोर चौधरी के नैनहर श्रीमनमोहन घोष बाबू, तथा श्रीराधाकुमुद मुकरजी और श्रीविनयकुमार सरकार को, जो नेशनल कौंसिल आफ़ एजुकेशन के सदस्य थे और क्रान्तिकारी दल अनुशीलन समिति के संचालक भी थे, सहायता से वि० वि० के विचार का प्रचार बंगाली जनता में खूब हुआ और कुछ धन भी मिला। परलोकवासी श्री लगतसिंह की सहायता और

उत्साह से परलोकवासी श्रीमहाराजाधिराज दर्भंगा ने भी इस सम्बन्ध की चर्चा और सहायता की आशा हुई। बाबू के हैंगोटिया यार और और प्रान्त के वयोवृद्ध नेता और कार्यकर्ता परलोकवासी श्रीबाबू गंगाप्रसादजी वर्मा भी बाबू के साथ हो लिये और कलकत्ता आगये। जोईश्वरसरनजी ने भी साथ दिया। परलोकवासी श्रीपण्डित गोकरननाथ मिश्रजी ने भी पूरा सहयोग का हाथ बढ़ाया और गाड़ी चल खड़ी हुई। जिस उत्साह और लगन बाबू के सफर का प्रबन्ध, धन के सञ्चालन का काम और इसी प्रकार की फुटकर कार्यों का कार्यभार अपने ऊपर ले लिया।

इतने समय के बाद लोक मत में तो चूक हो सकती है पर जहाँ तक स्मरण है विश्वविद्यालय का दौरा बंगाल में माहदह और फरीदपुर में हुआ, बिहार में पटना, मुजफ्फरनगर, भागलपुर और दर्भङ्गा में हुआ, युक्तप्रान्त में जौनपुर, काशी, प्रयाग, कानपुर, इटावा, पंजाब में अमृतसर और लाहौर में। इतने ही में प्रायः चार लाख रुपयों की सहायता का वचन मिल चुका था। एक प्रकार से सारे भारत में विश्वविद्यालय के आन्दोलन की दुन्दुभी बज चुकी थी। जनता के उत्साह का ठिकाना न था, बहुतों के हृदय में एक नया चाव, एक नई भावना और एक नवीन आशा की बाढ़ सी उमड़ पड़ी थी। कार्यकर्तागण फूले न समाते थे। भिन्न भिन्न नगरों की सभाओं में दानियों की प्रतिस्पर्धा देखने योग्य होती थी।

मुजफ्फरपुर में एक भिक्षा माँगनेवाली भीगन ने अपने दिलवर का कमाई, एक पैसा या एक अशर्फी, जो उसे मिला था इस यज्ञ-वेदी पर समर्पण कर दिया और दर्शकों को 'मुहब्बत' की याद दिलाकर चली गई। इसी प्रकार एक व्यक्ति ने एक फटी कमीज़ जो उसके बदन पर थी, उतार कर प्रदान कर दी थी। इन चीज़ों को नीलाम करने पर सैकड़ों रुपये मिले थे और ये वस्तुएँ भी वि० वि० को वापस कर दी गई थीं कि ये उसके संग्रहालय में विवरण के साथ सुरक्षित रखी जावें। वहीं मुजफ्फरपुर में एक बङ्गाली महोदय ने स्वयं ५ हज़ार रुपया दान किया था और पुनः

उनके गृह पर जाने पर उनकी पत्नी ने अपना बहुमूल्य स्वर्णकंकण बाबू को भेंट दिया जिसे उनके पति ने उसका मूल्य से अधिक मूल्य देकर ले लिया और पत्नी को फिर वापस दे दिया और जिसे उनकी पत्नी ने संग्रहालय में रखने के लिये पुनः बाबू को दे दिया। यहाँ कुशीनगर की एक और घटना भी उल्लेखनीय है। रात्रि हो चली थी, सभा में जन एकत्रित हो चुका था, एक ओर उसकी गिनती हो रही थी, दूसरी ओर लोटा लोटा भरे नोटों की ढेरी लग रही थी, राशनी जरा कम थी कि एक मंचस्थ दो थैलियाँ हजार हजार को उठा कर चल दिया। पीछे दौड़ हुई पर वह यह जा वह जा वाले और झाड़ियों में होकर गायब ही हो गया।

सभी जगह कुछ न कुछ ऐसी घटनायें हुई हैं कि जिनका उल्लेख बालकों के लिए शिक्षाप्रद और कौतूहल-वर्द्धक हो सकता है पर उस ओर न जा मैं दूसरी ओर झुकता हूँ।

ऊपर लिखा जा चुका है कि वि० वि० की दुन्दुभी बजाते हुए बाबू और उनके साथी कलकत्ता से लाहौर पहुँच गये थे। २०,२५ लाख का वचन मिल चुका था। हिन्दू-विश्वविद्यालय का आन्दोलन अमृतसर की बाढ़ के सहश समुद्र की ओर वेग से बढ़ रहा था। उसके आगे का पथ रोकना असम्भव हो चुका था। जब शिमला-शिखर से बाबू के लिये बुलावा आया, बाबू और उनके साथी भी शिमला पहुँचा। परलोकवासी राजा हरनामसिंहजी की कोठी में हम लोग ठहराये गये। बाबू उस समय के वाइसराय लार्ड हार्डिंग से मिलने गये और वहाँ से बड़े प्रसन्न आये और मुझे बुलाकर कहा कि वाइसराय ने विश्वविद्यालय का बनवाने का वचन दे दिया है। मेरे कांटा तो बदन में चुभ गया। मैं तो सन्न रह गया और मुख से हठात् निकल पड़ा कि—This is the death knell of the Hindu University—अर्थात् यह तो हिन्दू-विश्वविद्यालय की मृत्युघोषणा है। अस्तु हम लोग ऊपर से उतर कर फिर लाहौर वापस आये। लाहौर की वृहत्सभा में सर्वाग्रगण्य परलोकवासी लाला लाजपतराय ने कहा कि Charter or no Charter, Hindu Univer-

sity must exist," जिसके उत्तर में बाबू ने कहा कि "Charter and Charter and Hindu University must exist." इन वाक्यों से दोनों महान् व्यक्तियों की मनोवृत्ति का भली भाँति पता चल सकता है। अस्तु अब क्या था! अब तो चारों ओर से लोगों की सहानुभूति आने लगी। राजा-महाराजा, उपाधिधारी और देश में अपने को सर्वस्व समझनेवाले लोग इधर झुक पड़े और जहाँ गरीब व साधारण लोगों की जेबों में से गाढ़ी कमाई का पैसा एक एक दो दो की संख्या में भी आता था वहाँ अब बड़े बड़े लोगों का बड़ा बड़ा दान लाखों की संख्या में आने लगा। विश्वविद्यालय जनता और गरीबों का न रह कर सरकारी छत्रच्छाया के नीचे मुट्ठी भर राजा-महाराजाओं व बड़े आदमियों की संस्था रह गई। लाहौर से डेपुटेशन आगे बढ़ा, मेरठ में बड़े समारोह से सभा हुई, १२ घंटे तक का लम्बा जलूस निकला, परलोकवासी महाराजा दर्भङ्गा ने आकर शिरकत की और सभापति बनना स्वीकार किया और ५ लाख का दान भी दिया। इसी के पहले पूज्य पण्डित सुन्दरलालजी ने भी श्री हारकोर्ट बटलर के कहने पर मन्त्रित्व स्वीकार कर लिया था। अब बहाव का रुख दूसरी ओर चला था और आगे क्या हुआ वह सभी जानते हैं।

शिवप्रसाद गुप्त

Nearly thirteen centuries have seen the Parsis in India. For the last hundred years it has been established that the religious systems of the Hindus and the Parsis have created mutual affinities than any other two creeds, whether in the Aryan or the Semitic group. With every step in deeper literary and philological research we encounter fresh similarity, sometimes amounting to identity. Not only the structure of their respective sacred tongues, the Vedic Sanskrit and the Avesta, but the priestly ritual and rites of the two racet bear differences which betray little distinction. A list of comparative terms of technical sacerdotal usage employed in the Vedic Yajña and the Avesta *Yasna*, as shown even so cursorily by Oldenberg, proves amazing to the uninitiated. If we follow Hertel, the latest expositor of Avesta, investigating it in his parallel explorations of the Vedas and speaking with a mastery of both the relevant ancient texts, a mastery which presupposes an amount of vast collateral erudition, the divergences even of pronunciation in the sacred spoken word of the Hindu and the Parsi become contracted as we study the grammatical evolution. Only, we Parsis become painfully aware of the ignorance and negligence of our ancestral transcribers of the Avesta manuscripts. While almost a perfect system of syllabary, combined with a heretic obligation of learning the Vedas by heart, has transmitted this phase of Aryan culture down to us untained in its primal shape and sound, the insouciance of the Parsi priest-hood and their subsequent attempts at making up for it by fictitious interpolations and additions in barbarous solecisms have presented a contrast to the Hindu conservative purity, as glaring in the world of holy learning as humiliating in the world of piety

From time to time Parsi scholars have noted most striking analogies between the articles and the exercise of their faith

on the one hand and of the religion of the Hindus on the other. An attempt was made some centuries ago by a learned Dastur to translate the Avesta into a sort of Sanskrit. The later attempts of the Parsis are much more successful, and it is a pleasure to note that there is at last a corresponding movement on the part of Hindu thinkers, especially at Shanti Niketan and Benares, to abridge the distance existing between the tenets of the Hindus and their kinsmen now nationalized and permanently naturalised in India.

Among those Hindus of vision, of penetrating religious outlook and political breadth, I had the pleasure of personal acquaintance with Lala Lajpatrai, Swami Shraddhanand and one who is most happily still among us. To the Lalaji of honoured memory, Parsi was but another name for Hindu. When he held a special meeting of the Hindus in Bombay, my presence was resented by a young Mahratta; but Lalaji, who presided, over ruled the objection. As to Swami Shraddhanand, the Parsis in the heat of Gujarat, at centres like Surat and Navsari besides those of Bombay, will ever cherish the memory of one who had a message of genuine fraternal love for them on behalf of Hindus of generous mentality.

My relations with Pandit Madan Mohan Malaviya have not been equally intimate. They cannot be so with one whose engagements render correspondence impossible. What I know of him, however, has given my friends and myself most ample grounds to be convinced of his spacious religious tolerance. And when I saw the other day the epithet of Mahamana applied to him, the appellative indicative of a personage of elevated spirit, I thought that a more appropriate designation would be hard to devise. One of my happiest days was passed in Benares where Pandit Malaviya had invited me some years ago to the Assembly of Pandits freely to exchange views, the medium of expression being Sanskrit. It was here, in passing, that one could see how Sanskrit is still a living idiom among the cultured Hindus and not necessarily among those of a reactionary school.

And here he allowed me to express my then heretic beliefs and my suggestion that Hindus should go abroad and mix with non-Hindus just as their ancestors had done, braving the hardships of journey and voyages to the Near and Far East and farther away. And he supported me.

When I was connected with certain Bombay institutions maintained partly by Hindu contributions, designed especially to promote learning, I had suggested a translation of the Zoroastrian Gathas or hymns into Sanskrit, keeping to the poetic metre of the original, which is common to both the Hindu and Iranian civilizations. The project would have matured with the collaboration of seniors like Prof. A. B. Dhruva and others but for the ignorant impatience of some of the wealthy Parsis, on the one hand, and the unscrupulousness of some South Indian Hindus on the other. While my scheme was being very favourably considered, a Shams-ul-Ulama, innocent of Sanskrit, was so fascinated by the promises of a South Indian who proposed to bring forward hidden treasures of Parsi learning in Sanskrit, that despite my protests the amount which would have gone towards the translation of the Gathas into Sanskrit went into the pockets of a man whose present address the Parsi patrons of research are still in search of. And it is not the first time that the Parsis have thus been taken in, but that is, however, a different story. For the repeated deception is rather due to the vanity of some of their "scholars" ignorant of Hindu lore than to non-Parsi cupidity. Learned penury will prey on vainglorious superfluity.

Pandit Malaviya has evinced no antipathy to non-Brahmanic scriptures. He has positively invited not only discussion but an honest following of their precepts at his own temple of learning at Benares. I know from personal experience that the Parsis and others who study in the Benares Hindu University are enjoined, first to say their prayers and, secondly, to say their prayers in strict accordance with the dictates of the faith in which they are born.

I do not know how and where religious broad-mindedness can go further

I think that those who regard Pandit Malaviya as in any way inimical to non-Hindu cultures in India have shown less than the necessary amount of patience to study the Pandit's most enviable activities and intentions. He has sought the brotherly co-operation of Moslems and reiterated his resolve to attempt to make them appreciate that he is anxious to understand a public question as the Moslems would understand it. How a Hindu of his intense orthodox environment and up bringing, predisposition and education, could reconcile himself to cow-slaughter may appear amazing to many. And yet this seeming miracle was performed by the Pandit by the concessions which he was prepared to make to the Moslems for no commercial *quid pro quo* but for a brotherly concord as children of the same soil which he himself adores as heavenly. This man of ingrained predilections and hereditary instincts, bred in his bones for generations untold,—that this man, a Brahmin of Brahmins, should agree to embrace as confrere a member of the Depressed Class appears another marvel to those who have a notion of the depth of the prevailing Hindu feeling on the question. From my personal experience I can realise the agonising wrench it must give to my orthodox friends to make what from their standpoint are really honest concessions conceived in a spirit of heavy sacrifice to non-Hindus. Their only purpose was to secure steady and tranquil mass advancement in the harassed land of ours. Deputed to Malabar by the then Viceroy who perceived the advantageous position of an Indian, who was neither a Hindu nor a Moslem, I had the fortune to witness there in the Mopla riots the shudder with which the Nambodris and other Brahmans contemplated physical contact with the untouchables and non-Aryans It was there that I saw the wild children of nature, the Moplas, instigated by political bodies, commit atrocities, many of which will not bear repetition. Some of the latter from the religious standpoint caused ineffaceably poig-

nant agony to the Brahmans. And these related not to mere mangling of bodies. That our Pandit, whose customary and traditional mode of life is not far removed from the orthodox of Malabar, should stretch out his hand of loving kindness towards non Hindus, not only in his own motherland but, as we have seen recently, also in Europe, is to my mind a landmark in the acceleration of the Hindu social spirit, expanding towards humanitarianism.

I regret I cannot but agree with many who hold that the Parsis have flourished in India exclusively during the last 150 years of British rule. Documentary evidence shows that with the utmost tolerance that the Hindu Princes extended to us, they often had not the power to protect our religious sanctuaries. In business and ordinary civic avocations the majority of Parsis in pre-British days were a community hardly to be differentiated, as observed by contemporary European travellers, from the lower strata of Hindu society. Parsi material progress was insignificant. Their spiritual growth was almost coincident with superstition. This may lead one like me, who have not left investigated many periods of Parsi annals to look with anxiety upon the future. But we feel reassured. The protagonists of political upheaval, like Pandit Malaviya, may be on the highway to procure elimination of the British as a factor to reckon with in our country. Nevertheless, I am satisfied, if not positively gratified, about the future when I contemplate the certainty that many of the men at the helm will be the embodiment of energy, foresight and a keen eye on the judiciously practical such as Pandit Malaviya is endowed with by nature. The majority of leaders of his generation, and all of the younger one, temperamentally regard the minorities not without solicitude. The Hindu society has long looked upon the Pandit with reverence, confidence, hope. The Parsis, their spiritual kinsmen and compatriots, do not miscalculate when they too look up to him with equal assurance for fair dealings in all the great coming events which have been

casting their mystifying shadows before us since the rise of Mahatma Gandhi.

G. K. NARIMAN

THE PRINCE OF BEGGARS

India is said to be a land of beggars. It should not mean that begging or beggars are unknown elsewhere. Begging is a profession, often carried to the dignity of an art, which has its roots deep down in human nature. Street-begging is only one of the varied phenomena manifested by this ancient human instinct. Begging for money or for food, in streets or from door to door, is perhaps our Indian, if not an Oriental, speciality. Those, however, who show a contempt for it are often not averse to other subtler and more polished forms of the same. Even in the so-called more civilised countries begging is found to exist, and even to thrive, under artistic, or artful, or even fashionable guises. Tipping for example has received the same recognition and the same status (if anything even greater!) as begging has done in ours. In each case there is a strong support of tradition, with a mixture of some sentiment and of some necessity.

There are beggars and beggars. Some could only beg for money or food, or both. They are usually the commonest and the dullest of the lot. Some with an imagination will put it before you as a business proposition—for example, buy them a railway-ticket to perform or finish up a pious pilgrimage, and all or at least some of the merit will be yours. In the slightly higher strata of our society other forms flourish better. Begging for loans—never to be returned—and begging for votes are probably modern forms, though pursued with all the usual manifestations characterising mendicancy in general. Begging for funds, the account of which may be "rendered in Heaven", is a plant very fruitful in public life, while the student-world probably specialises in begging for certificates, tips or "questions" for examination, and even for so harmless but so tiresome an article as free advice. There are many other forms, equally

common though gilded by better-sounding terms. But one need not go into details.

We are thus not quite unique in our begging capacity. But perhaps not many realise that, within only the last two decades, we have given to the world two master-mendicants who have easily dwarfed all others, even as our Himalaya has dwarfed all other mountains.

They are not great merely in their begging achievements. They have revolutionised the whole game and brought in entirely new methods, just as they have set up new records. They have not only revived but even revivified the old calling, and have cleansed it and elevated it to a weapon of unrivalled power.

Both the masters are happily still with us, and may they give us many more exhibitions of their feats and set up still higher standards!

Undoubtedly one of the two is the Mahatma. His whole personality is reflected in his beggings—a condition indispensable to success. It will not be easy to decide whether his personality or his begging is more unique. Both are baffling and yet so deeply starring. There is no question that the world does not hold another universal beggar like him. He will beg from everybody, high and low, old and young, men, women and children, friends and strangers, and will show no partiality whatsoever to rank or sex, caste or creed, race or colour, age or occupation.

Now children are really born beggars. Perhaps they get it in their mother's milk—and women are of course past masters of this great art. But women and children both cannot hold against this arch-beggar; they are beaten at their own game and often come out utterly vanquished as they are transformed by this wizard from beggars to donors! It used to be said that parents would not let their children and ladies go to him for "darshan" with jewellery on; for if they did, they were sure they would never see the jewellery again.

There must be something fascinating and even mystifying in this supreme beggar who has managed to combine so much skill with so great a knowledge of human nature, so rigid a persistence with so fine a delicacy, and so deep a humility with so powerful a propaganda

He not only will beg from everybody: he will beg for almost everything His choice of patrons is scarcely more catholic than his taste for the alms he would accept Money and cash, purses and ornaments are matters of course. He has been displaying a special talent for coining personal gifts into undeservedly huge sums of money But he is never satisfied with these: no beggar true to his salt ever is, or shows that he is, satisfied.

The hand-spun yarn is of course a choice offering to him But his tastes often take fantastic turns He will want your time, an hour a day, if not more. He will want you to part from many things that are of no use to him—like videshi clothes, or smoking or drinks. Even Diwali crackers and marriage-dinners, many an old habit of dressing and living, must be given up to him. Not only smokers and drinkers, dandies and idlers, but great money-makers even have competed with one another in giving to this wizard their most cherished possession.

It was the late Mr. Gokhale who first publicly confessed to the irresistible power of his begging Years, events and success itself have added the finishing touches. And we now have the spectacle of a crore and more of rupees collected, in an incredibly short time, and against all conceivable impediments.

But does he suffer from class-hatred? For who is a more determined opponent of the mere conventional beggars than this great beggar himself? His spinning-wheel is run, like a "sudarshana-chakra" to destroy all beggary except such as his, and to kill idleness and poverty, the two strongholds of common beggars. Or is he afraid of another beating him at his own game? He has certainly a peculiar pride. Though an avowed beggar and a Baron of Gujarat,

he has been often reported to have refused to beg of Swaraj from the British

There is only one other of whom we can think by his side. And that is our Pandit Malaviyaji. Like every true master of the craft, he has his own style, his own technique. They are essentially different from those commonly employed. He would not scatter his seeds far and wide, all over the four quarters (or ten, if there be really as many quarters of one whole). He would dig deep and specialise in intensive cultivation. Of course the soil must be rich. It is always select. He would not worry small men, but would take care to get in his net Rajas and Maharajas, merchant-princes and Marwari millionaires. He would not be in a hurry, but he generally knows like an expert the best harvest-season. He almost disdains small fishings. They are so wasteful and he has his own health and his own religion to look after. But give him a lakh and he would be content to take it as a measurable unit. A lakh a day has sometimes been his average, which he has occasionally surpassed

His manner and *modus operandi* are necessarily unlike those of the half-clad Fakir. The U. P. mendicant must naturally be more courtly, more polished, and even magnificent in his appeals. His style is admirably sustained by his spotless white clothing, by a noble figure and a soft caressing voice

His armoury is thus full of the choicest weapons and none could wield them with greater skill. Learning, patriotism, piety, imagination and their kins are all welded together with a rare eloquence and a rarer effectiveness. With unerring craftsmanship he has hewed contributions from the most orthodox as well as the most heterodox. While wonderfully retaining a front seat among the leaders of our people, he even more wonderfully pierced the invulnerable citadel of the bureaucratic steel-frame in our country ,and, with himself in prison, succeeded in keeping open the breach so as to let out a few precious units of offering from the Government

What may be the secret of the phenomenal success of these two beggars?

It cannot be merly their gifts of speech. If cannot be merely their personalities: for they both do their job with so much self effacement. It cannot be merely the promised land which they pretend to have seen, and the way to which nobody else knows. Because a large part of our people see through their talks, which they think sheer madness, while of the remainder a few share the madness with them, but they never succeed in their begging-missions. It cannot even be in the times—the reputed cause of all causes and the last key to all difficulties. Because nobody has changed the times even as they have done.

What is it then?

Till they themselves choose to explain, we can only bow our heads in mute homage.

K. C. PANDYA

अतीत स्मृति—आत्मानुभव

१—विद्यार्थी का उत्साहवर्धन

मैं विद्यार्थी था—पं० मदनमोहन मालवीयजी का नाम सुना करता था। जब वे बाबू रामकाली चौधरी के यहाँ ठहरा करते थे, दो एक बार उनके दर्शन भी हुए थे।

मेरे स्वर्गवासी मामा डाक्टर छन्नूलाल ने जो काशी नागरी-प्रचारिणी सभा के उन दिनों सभापति थे, स्वास्थ्य-रक्षा पर एक लेख, सभा के एक अधिवेशन में, शायद सं० १८४५ में, पढ़ा था। सभा का वह बैठक कारमाइकल लाइब्रेरी के कमरे के बाहर पश्चिम की तरफ़ बरामदे पर हुई थी। उसमें श्री मालवीयजी भी आये थे। डाक्टर साहब ने स्वास्थ्य-रक्षा की दृष्टि से भारतीयों के रहन-सहन की कड़ी आलोचना की थी। श्री मालवीयजी ने उस समय एक छोटा सा मधुर व्याख्यान देकर कहा था कि डाक्टर साहब ने बातें सब ठीक कहीं हैं पर 'सत्यं ब्रूयात, प्रियं ब्रूयात" सिद्धान्त का अनुसरण नहीं किया है। जहाँ तक मुझे याद है, मैंने उनका यह पहला ही व्याख्यान सुना था। उस व्याख्यान को सुनने के बाद मैं उनके पास गोस्वामी भवानीपुरी के यहाँ, जहाँ वे ठहरते थे, पहुँचा। उन दिनों पं० मथुराप्रसाद मिश्रजी अपने समय के बड़े प्रसिद्ध हेडमास्टर माने जाते थे। वे पेंशन लेकर दशाश्वमेध घाट पर एकान्तवास करते थे। वे अपने अँग्रेज़ी उच्चारण के लिए प्रसिद्ध थे। मुझ पर उनकी बड़ी कृपा थी। एक दिन मैं श्री मालवीयजी को उनके पास ले गया। दोनों एक दूसरे से बहुत प्रेम और श्रद्धा से मिले।

वहाँ हिंदी नागरी-प्रचारिणी सभा के लिए मैंने जापान का इतिहास लिखा था। श्री नालवोकजी ने मुझसे पूछा कि "आकाशपुरा की नई पुस्तक Japan by the Japanese पढ़ी है या नहीं?" मैंने कहा वह पुस्तक मँगाई है इसलिए मैं पढ़ ही नहीं सका। इसी प्रकार बातचीत करता मैं उनके साथ काशी स्टेशन तक गया। वे प्रयाग जाने के लिए रेल में बैठ गये और कुछ लोगों से बातचीत करने लगे। रेल छूटने ही वाली थी, कि उनके क्लार्क ने धीरे से मेरे हाथ में कुछ रुपये देने चाहे और कहा कि श्री नालवोकजी की आज्ञा से मैं जापान-सम्बन्धी पुस्तक खरीदने के लिये दे रहा हूँ। मैंने रुपया लेने से इनकार किया। क्लार्क ने आग्रह किया—इतने में रेल चल दी।

२—सद्भुत त्याग

दिसम्बर १९०५ में कांग्रेस बनारस में हुई थी। उसके साथ ही सोशल कान्फ्रेंस का भी अधिवेशन हुआ था। कान्फ्रेंस के लिए सब प्रबन्ध हो गया था। बम्बई हाईकोर्ट के जज सर नारायण चन्द्रावरकर सोशल कान्फ्रेंस के प्रधान मंत्री थे। उनके ठहराने का भार स्वर्गवासी राजा नाभवलाल ने अपने ऊपर लिया था। जिस दिन प्रातःकाल सवेरे चार बजे उनको काशी पहुँचना था उनकी एक दिन पहले शाम को तार द्वारा मालूम हुआ कि श्रीचन्द्रावरकर बड़े सवेरे पहुँचेंगे। कांग्रेस राजघाट के किले पर हुई थी। वहीं राजा नाभवलाल का डेरा था। मैं रात को उनके वहाँ पहुँचा। उनसे भेंट नहीं हुई। उस जमराइट में मैं राजा नाभवलाल के छोटे भाई के खेमे में गया। वहाँ भी वे नहीं मिले। वहाँ कांग्रेस के मंत्री लाला सभापति श्री गोखलेजी ठहरे हुए थे। मैं उनसे मिला और मैंने प्रार्थना की कि वे सर नारायण को अपने यहाँ ठहरा लें। उन्होंने कहा कि सर नारायण के लिए पूरा मकान चाहिए। वे "महादेव" (रानडे) की तरह नहीं हैं कि किसी के साथ थोड़ी जगह में भी निर्वाह कर लें। बिना कुछ प्रबन्ध किये ही ईश्वर पर

भरोसा कर मैं अंधेरे तीन बजे काशी स्टेशन पर पहुँचा। मैं अत्यन्त व्याकुल था कि क्या करूँ। रेल आ गई, पर संयोग से सर नारायण न आए। वे मोगलसराय में रह गये और उन्होंने अपने नौकरों से कहला भेजा कि मैं दूसरी रेल से जो तीन चार घंटे बाद आनेवाली थी आऊँगा। मैंने ईश्वर को धन्यवाद दिया और पाँच बजे फिर राजा जयकृष्णदास के डेरे में गया। दिसम्बर के जाड़े का सवेरा था। मालूम हुआ कि वे अभी सो रहे हैं। पीछे की तरफ़ एक कमरे में श्री मालवीयजी दिखलाई दिये। वे शौचादि से उठी समय निवृत्त हुए थे। मुझे देखते ही उन्होंने पूछा कि इतने सवेरे कहाँ आये। मैंने अपनी कठिनाई बतलाई, वे हँसकर बोले "सर नारायण को इसी खेमे में ले आओ।" यह कहते ही वे खड़े हो गये और उन्होंने नौकर से कहा असबाब अब लादने ले के नीचे ले चलो। मैंने उनसे प्रार्थना की कि वे ऐसा न करें, कहीं न कहीं बन्दोबस्त हो ही जायगा। परन्तु उन्होंने न माना। स्वयं भी असबाब बाहर उठा कर रखना शुरू कर दिया और मुझसे कहा जाओ स्टेशन से उनको ले आओ। रेल का समय निकट था। मैं सर नारायण को छोड़ी ही देर में ले आया। वे उसी खेमे में ठहर गये। दूर के दो पेड़ के नीचे चटाई लगाकर श्री मालवीयजी ने अपना प्रबन्ध कर लिया। दिन चढ़ने पर बहुत से लोगों ने श्री मालवीयजी को उस पेड़ के नीचे देखा।

३—रात के समय स्त्री की रक्षा

एक दिन रात के एक बजे श्री मालवीयजी हिन्दू स्कूल के बोर्डिंग हाउस में जिसमें मैं रहता हूँ पधारे और चार चार बड़ी उम्र के लड़कों को अपने साथ मोटर पर ले गये। एक घंटे के अन्दर उनको स्वयं लाकर पहुँचा गये। पता लगा कि जब वह बनारस स्टेशन पर उतरे थे, उन्होंने देखा कि दो बदहवास बच्चेवाली एक स्त्री के पीछे लगे हैं और वह उनसे बचने का प्रयत्न कर रही है—वह उस स्त्री के साथ हो लिये और जब वह इक्के पर बैठ गई तब उन्होंने उसका पता जान लिया। बोर्डिंग हाउस के लड़कों को अपने साथ ले जाकर उनको लोगों में

उस स्त्री का पता लगाने के लिए छोड़ दिया। लड़कों ने पता लगा लिया। पहले तो उस स्त्री ने डर कर दर्वाज़ा बन्द कर लिया और समझा कि वही बदमाश उसके पीछे पड़े हैं, परन्तु जब उसको मालूम हुआ कि श्री मालवीयजी ही ने उसकी रक्षा की है और वे यह जानने के लिए बाहर खड़े हैं कि वह घर पहुँच गई अथवा नहीं, तब वह प्रसन्न हो गई और उसने तुरन्त दर्वाज़ा खोल दिया।

रामनारायण मिश्र

A TEACHER'S REMINISCENCES

I am glad that Madan Mohan is advancing in age and that there is a proposal to commemorate his 70th birthday. He is younger than myself by eight years. When he was a boy he used to come to me for any assistance I could give him in his studies. I always tried to help him, and he therefore calls me his Ustad. Whenever we meet each other, he shows much respect for me and I remember the good old days with deep affection.

We had a literary and debating society at Allahabad. I was its honorary secretary. Madan Mohan did not at first promise well as a speaker, but he gradually showed signs of his future greatness and now he is by universal acknowledgment one of the most eloquent and perfect orators on the popular platform.

After taking the law degree, he practised at the bar, but his heart was always set on public work. Had he concentrated his energy on his legal practice, there is not the least doubt that he would have soon risen to the top of the ladder. It has been rightly said that he had the ball at his feet but he refused to kick it.

His first great work was with regard to collection of donations for the Hindu Boarding House at Allahabad. His efforts were quite successful. The palatial building, close to the Muir Central College, is an ornament of Allahabad.

Madan Mohan next devoted his attention to the introduction of Hindi as a court language in these provinces. He had unexpected success in this matter also. But his greatest achievement is the Benares Hindu University. It is fortunate that he received at the beginning the help of the Hon'ble Dr. Sir Sundar Lal and later that of his two younger brothers—Rai Bahadur Pt. Baldeva Ram Dave, Chairman of the

Improvement Trust of Allahabad and Rai Bahadur Pandit Kanhaiyalal Dave, retired Judge of the High Court of Allahabad

I may repeat what I have said in my book, *Thoughts in Retirement*, that the two Pandits were like twin brothers, each being unable to do without the other. While Pandit Sundar Lal's intellect worked wonders, without Pandit Malaviyaji's efforts in the collection of funds, the Hindu Boarding House and the Hindu University would never have come into existence. I have also said while expressing sorrow at Dr. Sundarlal's demise, that God may prolong the life of the most successful beggar of Allahabad. God is no doubt prolonging his life. May he live long to serve the cause of his country which he has always held dear to his heart.

It will not be out of place to quote the following verse of Fiesmi Azad

Asar lobhane ka pyare tere bayan men hai
Risa ki ankh men jadu tera zaban men hai.

"Some one has magic in his eyes but thou hast it in your tongue."

Malaviyaji's tongue is so persuasive that I may be allowed to cite an incident relating to myself. When the construction of the Hindu Boarding House was in progress, he came to me while I was preparing myself to go to my official work, and asked me to subscribe a thousand rupees so that one of the rooms might bear my name. I was so much overpowered by his persuasive eloquence, that without giving the matter any thought, I agreed and gave him a cheque for the full amount. I often thought afterwards that I ought to have taken time to consider the matter and should not have been hurried. But the magical force of Pandit's request had been irresistible.

It is admitted on all hands that no other person could have collected the funds with which the Benares Hindu University has been started and is being sustained. Madan Mohan has been the most successful beggar of India. May

God prolong his life and give him increased strength to serve his country.

SANTAN DAS

*Rai Bahadur Santan Das is a respected citizen of Allahabad. He is eight years older than Malaviyaji. It is said that he is the only man left in Allahabad, who has the privilege of addressing Panditji as 'Madan'.

मदनमोहन के सम्बन्ध की कुछ पुरानी स्मृतियाँ

ये दीनेषु दयालवः स्फुरति यान्तःसेवि न श्रीमदो
यद्वा ये न परोपकारकरणे तुष्यन्ति ये याचिताः।
स्वस्थाः सन्त्यपि यौवनोदय-महाव्याधि-प्रकोपोदये
ते भूमण्डल-मण्डनैक-तिलकाः सन्तः कियन्तो जनाः॥

चि० पं० मदनमोहन मालवीय से मेरा प्रथम परिचय उस अवसर पर हुआ जब वे घोड़े पर सवार हो, दूल्हा बनकर मिर्ज़ापुर निवासी पं० नन्दरामजी के यहाँ पधारे थे। महादेव की इमली के नीचेवाला वह दृश्य मेरे हृदय-पटल पर आज भी अंकित है। मैं उन दिनों गवर्नमेण्ट हाई स्कूल, मिर्ज़ापुर के संस्कृत-विभाग में संस्कृत-साहित्य के धुरन्धर विद्वान् स्व० पं० महाधरप्रसाद मालवीय की अध्यक्षता में संस्कृत पढ़ता था। उक्त पण्डितजी मालवीयजी के चाचा थे। मालवीयजी की बारात में शामिल होने का सौभाग्य मुझे इन्हीं के शिष्यवर्ग के साथ प्राप्त हुआ था।

मिर्ज़ापुर में शिक्षा समाप्त करके मैं ओ १००८ स्वामी श्रीदयानन्दजी सरस्वती महाराज के साथ आनन्दवाग, बनारस में रहने लगा।

मालवीयजी से मेरा दूसरा स्मरणीय सम्पर्क प्रयाग के सुप्रसिद्ध विद्वान् स्व० पं० सरयूप्रसाद मिश्र के यहाँ हुआ था। मैं स्वामीजी का काम छोड़कर प्रयाग चला आया था और चिकित्सा का कार्य आरम्भ कर दिया था। पं० सरयूप्रसाद मेरी चिकित्सा में थे और मालवीयजी उनके यहाँ आया जाया करते थे। मालवीयजी भी रक्त पित्त की बीमारी में ग्रस्त थे। पं० सरयूप्रसाद की सलाह से उन्होंने भी मेरी चिकित्सा

आरम्भ कर दी। मुझे खूब स्मरण है कि इस बार मैंने बहुत दिनों तक मालवीयजी की दवा की थी मगर किसी प्रकार उनका रोग दूर हो न होता था। मगर मदनमोहन का विश्वास मेरे ऊपर अटल था। उनके घरवाले उनसे नाराज़ होते थे। कहते थे—"शिवराम की दवा मत करो। वे तुम्हारा बहुत सा रुपया खर्च कराते हैं और तुम्हें ठगते हैं।" उनको मदनमोहन का उत्तर विलक्षण था। वे लोगों से नहीं कहते कि मेरे ही कुपथ्य से मेरा रोग नहीं छूट रहा है। शिवरामजी की चिकित्सा से और उनकी आदमीयत में कोई कमी नहीं है।

मगर घरवाले चिन्तित थे। उनकी चिन्ता भी अकारण न थी। वे मुझसे भी मिलते थे और सचिन्त होकर पूछते थे कि क्या कारण है कि मदनमोहन आपकी दवा में इतने दिनों से हैं मगर अभी तक आराम नहीं हुए। अलावा में परिवर्तन का भी कोई चिह्न उनमें नहीं मिल रहा है। मैं भी परेशान था। मेरी दवा में रोग दूर करने की शक्ति ज़रूर थी मगर पथ्यहीन को पथ्य से रहने के लिए विवश करने की शक्ति उसमें न थी। मैंने मालवीयजी के घरवालों से कहा कि उनकी बोलने की आदत बहुत बढ़ी हुई है। जब तक यह आदत न छूटेगी तब तक मुँह से खून का आना बन्द न होगा। मगर मदनमोहन का बोलना नशा था। चेष्टा करने पर भी वे बोलना छोड़ न सकते थे।

मदनमोहन के बड़े भाई पं० लक्ष्मीनारायण को मेरी सलाह जँच गई। फिर क्या था, वे छड़ी लेकर मदनमोहन के साथ रहने लगे। एक दिन ऐसा हुआ कि मालवीयजी से तक बड़े सम्भावित व्यक्ति मिले। उस अवसर पर मैं भी मदनमोहन के पास उपस्थित था। उस प्रतिष्ठित व्यक्ति से और मालवीयजी से बातें होने लगीं। प्रहरी पं० लक्ष्मीनारायण की छड़ी लिये मौजूद थे। जब उन्होंने देखा कि बातचीत का सीधा अब पथ्य से रहने की सीमा का उल्लंघन कर रहा है तब उन्होंने प्रकार से इस ओर मदनमोहन का ध्यान आकर्षित किया। मदनमोहन तो तीन थे। उन्हें पथ्यापथ्य की कोई परवाह न थी। लाचार होकर लक्ष्मीनारायण को कहना पड़ा—'बस भाई!' उस समय मदनमोहन को बहुत बुरा लगा। वे झुँझला गये। वे यह कहते हुए वहाँ से चल दिये—'हमें ऐसी दवा

को जरूरत नहीं। मगर पं० लक्ष्मीनारायण पर उनकी इस भुकभुकाहट का कुछ भी असर न पड़ा। उन्होंने छड़ी लेकर मदनमोहन के साथ रहना न छोड़ा।

'हिन्दुस्तान' की सम्पादकी

यमुना किनारे महाराजा बनारस की कोठी में मदनमोहन के उद्योग से सभ्य-हिन्दू-समाज का एक अत्यन्त महत्त्व-पूर्ण अधिवेशन हुआ था। जलसा तीन दिन तक होता रहा और उसकी चहल-पहल कांग्रेस के अधिवेशन की चहल-पहल से कम न थी। उस समय अनेक पाश्चात्य देशों की सैर करते हुए काशीनरेश महाराजा स्व० राजा रामपालसिंह प्रयाग पधारे थे। वे भी सभ्य-हिन्दू-समाज के जलसे में शरीक हुए। इस अधिवेशन के अध्यक्ष बरवाधिपति वैष्णवावतार श्रीमद्दाचारप्रसादजी निर्वाचित हुए थे। पं० लक्ष्मीनारायण ज्यास वैद्य के प्रस्ताव से उन्होंने सभापति का आसन ग्रहण किया था। राजा रामपालसिंह सभापति के कार्य में अनेक मनमोहनी-पूर्ण दलील इस रूप में देते थे जो मदनमोहन को बुरा लगता था। राजा साहब कभी कभी कह उठते "चूँकि हमारे प्रेसीडेण्ट साहब अच्छी तरह काम कोहते हैं इसलिए उनकी तरफ से मैं कहकर कमी-बेशी की पूर्ति किये देता हूँ।" इस कृतिका के उपरान्त वे एक भाषण करने लगे। इस प्रकार के अबाध दखल से मदनमोहन ही नहीं और भी अनेक लोग असन्तुष्ट थे। पर राजा साहब का नाम बड़ा था और उन्हें रोकने की हिम्मत ही किसकी थी। पर अनुचित कार्यवाई को मदनमोहन जैसे बर्दाश्त कर लेते। ऐसी कार्यवाई के विषय में खड़े होकर राजा साहब के कान में कुछ कहते हुए मदनमोहन कई बार देखे गये। वे राजा साहब को रोकते थे। मगर राजा साहब पुकार देते थे।

जलसा समाप्त होने पर राजा साहब ने अपने 'हिन्दुस्तान' नामक पत्र में सभ्य हिन्दू समाज के इस अधिवेशन की प्रशंसा करते हुए लिखा था कि अधिवेशन पूर्ण सफल रहा, मगर "उसमें दो एक लौंडे ऐसे ढीठ थे कि वे बड़े बड़े राजा-रईसों और बाबूओं (वकीलों) को व्याख्यान देते समय उनके कान में सलाह देने की धृष्टता करते थे।

इस लेख में मदनमोहन के प्रति राजा साहब की नाराजगी पूरी रूप से स्पष्ट थी। मगर यह नाराजगी क्षणिक ही थी। इस घटना के थोड़े ही दिनों बाद राजा साहब की गुणग्राहकता और उदारता ने उनको मदनमोहन से मिलने की कोशिश करने और उन्हें अपने पत्र 'हिन्दुस्तान' का सम्पादक बनाने के लिए विवश किया। मदनमोहन २५०) रु० मासिक पर राजा साहब के यहाँ 'हिन्दुस्तान' के सम्पादक नियुक्त हो गये।

राजा साहब पर मालवीयजी के सहवास का चमत्कारी असर पड़ा। उनकी नशा पानी और अनेक लतें बिलकुल छूट गईं। एक दिन का जिक्र है कि हिन्दू-समाज की बैठक थी और उसमें "कन्सेन्ट बिल" पर विचार हो रहा था। इस बैठक में प्रयाग के प्रतिष्ठित वकील बा० इन्द्रनारायण-प्रसादजी भी उपस्थित थे। मुंशीजी ने खानगी तौर पर मदनमोहन से कहा—"महाराज, आप पूरे दिनों काम्प्रोमाइज़ के यहाँ पहुँच गये हैं। आपके सहवास से अवश्य ही राजा साहब का खान-पान और रहन-सहन बहुत पवित्र हो जायगा। इस अवसर पर बा० चारुचन्द्र मित्र और मुंशी काशीप्रसाद भी सभा में उपस्थित थे। इन्हीं उपस्थित मित्रों में से कोई बोल उठे—इनके संग से पान तो राजा साहब ने बिल्कुल ही बन्द कर दिया।

सम्पादक बनने के बाद मदनमोहन का अधिकांश समय हिन्दुस्तान के सम्पादकत्व में ही लगता था मगर उससे भी समय बचा कर वे वकालत का अध्ययन भी करते थे। उन दिनों रायबहादुर बा० बलदेवरामजी दर्ब जाम्बनगरा में रहते थे। उन्हीं के काठे के बड़े कमरे में रोज आकर मालवीयजी कानून का अध्ययन करते थे। बलदेवरामजी की मदद से उन्होंने वकालत भी पास कर ली, परन्तु वकालत पास करने के पहले ही से मदनमोहन के पास मुकदमे आने लगे थे। मदनमोहन इस समय तक काफी प्रसिद्ध हो चुके थे।

अपने गुरु पं० बेनीरामजी कान्यकुब्ज के साथ काम सीखकर मदनमोहन ने स्वतन्त्र रूप से वकालत शुरू कर दी। वकालत से उनको

पहली आमदनी ५) रु० हुई थी। यह आमदनी मुझे इसलिए स्मरण है कि मुझे भी शुरू शुरू में ५) रु० ही की आमदनी हुई थी।

जब से मदनमोहन ने हिन्दुस्तान का सम्पादन करना शुरू किया था तब से राजा साहब उनको २५०) रु० मासिक बराबर देते रहे। मदनमोहन की वकालत जब चलने लगी तब बार बार इनकार करने और मना करने पर भी राजा साहब इन्हें मासिक २५०) रु० मदनमोहन के पास भेज दिया करते थे। एक दिन मदनमोहन ने राजा साहब से कहा कि महाराज, अब तो मैं आपका कुछ काम नहीं करता। आपका नौकर मैं भी नहीं हूँ—"नौकरी में!" राजा साहब रुष्ट होकर बोले, "मालवीयजी, क्या आपने कभी मेरे मन में या बर्ताव में अपने लाभ या किसी के साथ नौकर का भाव पाया है। आपके पास विद्या है और आप गुणों की खान हैं। उनके द्वारा आप मेरी सहायता करते हैं और मैं भी थोड़े पैसों से आपकी सहायता करता हूँ। मुझ आप जैसे बुद्धिमान पुरुष के मुँह से ऐसी बातें सुन कर बहुत दुख हुआ। ऐसी बातें आप को शोभा नहीं देतीं।"

इस तरह की फटकार राजा साहब के अयुक्त हो थी। गुणवान की परख करना राजा साहब का खास गुण था। दया के सम्बन्ध में राजा साहब से मेरा सम्पर्क हुआ था। उनकी यह विशेषता थी कि एक बार जिस आदमी से उनको पत्र जाती थी उस आदमी से वे सदा के लिए एक सम्बन्ध कायम रखने की कोशिश करते थे।

कुत्ते की शुश्रूषा

एक बार मदनमोहन बिल्ली की तरह मेरे घर आ धमके। वे बहुत जल्दी में थे। बोले—एक कुत्ते के कान के पास घाव ही से निकला हुआ एक बड़ा घाव है। घाव में कीड़े पड़ गये हैं। वह उस तरफ का सिर-माथा और कान झटकारते हुए भागता रहता है। उसको दवा बताइए। मैंने एक अँगरेजी दवा तजवीज की और इस सम्बन्ध में सलाह के लिये डाक्टर अविनाश के यहाँ गया। उनसे सारा हाल कहा। अविनाश हँस पड़े। बोले आपकी तजवीज की हुई दवा ठीक है। मदनमोहन मेरे यहाँ से होकर दौड़े हुए बाबल कुंजे के पास गए।

उनके साथ में बहुत से स्कूलों लड़के भी थे। कुत्ता तकलीफों के डर से टट्टर की आड़ में दुबकी होकर बैठा था। मदनमोहन ने एक बाँस में कपड़ा लपेट कर उसे दवा से तर किया और दूर से कुत्ते के घाव में दवा लगाना शुरू किया। कुत्ता भयंकर स्वर से गुर्राता और भूँकता था। वह दवा लगानेवाले को मार कर गिरा देना चाहता था। पर मदनमोहन भी अपनी धुन के पक्के थे। वे चुपचाप दवा लगाते जाते थे। दवा लगाने के बाद कुत्ते को आराम मिला और चिल्लाता हुआ कुत्ता थोड़ी देर में आराम से सोने लगा। ऐसा दुखी कुत्ता पागलपन की अवस्था में रहता है। उस समय मदनमोहन की धुन में भी पागलपन का ही पुट था। अविनाश को हँसी का यह एक आकुल कारण था। अविनाश डाक्टर से इसलिए ऐसी कार्रवाई पर हँस सकते थे, पर उस दुखी कुत्ते के दुख को अनुभव करने और उसके दुख को दूर करने की व्याकुलता के उद्वेग के लिए एक ऐसे हृदय की जरूरत है जो मदनमोहन जैसे कुछ थोड़े से अविज्ञा-सम्पन्न महानुभावों को ही प्राप्त होता है।

अहिंसा-प्रेम

मदनमोहन का स्वदेशी प्रेम बहुत पुराना है। बाबू राधाकृष्णजी खत्री और बाबू हरदेवलालजी वगैरह के द्वारा प्रचार से बड़े धूम-धाम से देशी विलायत कम्पनी खुलवा चुकने के उपरान्त एक दिन मदनमोहन मेरे पास आये और स्वदेशी वस्तुओं के विषय में बातचीत होने लगी। मालूम हुआ कि बेहद कर हिंसाविरोधी हृदय को एक गहरी व्यथा पहुँचा है। मदनमोहन ने कहा कि जूतों के कारण लाखों दीन और बेगुनाह पशुओं को जान मारी जाती है। चमड़ा के लिए असंख्य पशुओं के मारे जाने का वर्णन डाक्टर जयकृष्ण न्यास ने मुझे बताया है। उनकी बात सुनकर मुझे बहुत दुख हो रहा है और मेरे मन में यही चिन्ता हो रही है कि किस प्रकार इन गरीब पशुओं के जीवन की रक्षा की जाय।

बाबू राधाकृष्ण गुप्त से कहा—बाबूजी, मैंने तो चमड़े का जूता पहनना छोड़ दिया, वैसे ही कपड़े का जूता बनवाया है। कलाई का बेल्ट भी ऐसा अजूबा बनाया जा सकता है कि उससे गाड़ी का पहिया बन सकता

है—ऐसा मैंने सुना है। बाबू राधाकृष्ण के दामाद सागर के हेडमास्टर राजा बाबू भी उपस्थित थे। मदनमोहन के चले जाने के बाद उन्होंने पूछा—साहब! ये कौन हैं? जवाब मिला कि ये मदनमोहन मालवीय हैं। राजा बाबू ने कहा—इनकी बातें तो बिल्कुल पागलपन की हैं। भला कहीं कागज के नोट और कपड़े के द्वारा जूते बन सकते हैं और उनसे काम चल सकता है?

इसी सम्बन्ध में मदनमोहन के विशाल हृदय, अहिंसा-प्रेम और दया-भाव की देर तक प्रशंसा होती रही, मगर फिर भी राजा बाबू का सिद्धान्त यही रहा कि मालवीय पागल है और ऐसे आदमी दुनिया में किसी काम का नहीं। दुनिया अपना सिद्धान्त बनाती-बिगाड़ती रहती है परन्तु महापुरुष अपनी लगन के पक्के होते हैं।

पितृ-स्नेह

मदनमोहन के पिता भगवद्भक्तिप्रचारक विद्वद्वर पं० 'मदनमोहन' जी मालवीय ने 'सिद्धान्तोत्तम' नाम का एक ग्रन्थ बड़े परिश्रम से लिखा था। उसके छपने के सम्बन्ध में एक दिन मदनमोहन ने मुझसे कहा कि बाबू की उम्र अब बहुत अधिक हो रही है। कदाचित् वे स्वर्गवासी हो गये और उनके सामने सिद्धान्तोत्तम ग्रन्थ न छप सका तो मुझको अधिक कष्ट होगा। इसलिए जहाँ तक हो सके उसे बहुत शीघ्र अपने प्रेस में छपाने का प्रयत्न कीजिए। ग्रन्थ को प्रकाशित देखकर पं० मदनमोहन जी बड़ी प्रसन्नता हुई। पिता की प्रसन्नता ने मदनमोहन के आह्लाद को कई गुना बढ़ा दिया।

सर सुन्दरलाल और मदनमोहन

सर सुन्दरलाल धुरन्धर विद्वान और विलक्षण प्रतिभा सम्पन्न होते हुए भी बहुत ही सीधे सादे व्यक्ति थे। उनकी प्रतिष्ठा और यश में स्वयं वृद्धि हुई। स्वयं उन्होंने कभी मान गौरव की वृद्धि के लिए प्रयत्न किया हो ऐसा मैंने कभी नहीं देखा। परन्तु मदनमोहन में आदमी पहचानने और उससे उपयुक्त काम लेने की विलक्षण शक्ति थी। मदनमोहन सर सुन्दरलाल को योग्यता के कायल थे। उनके मन में आया कि अगर ऐसे योग्य व्यक्ति कहीं कौंसिल में पहुँच जाय तो देश को

अच्छी सेवा हो सके। मदनमोहन को धुन सवार हो गई और उन्होंने चारुचन्द्र मित्र के विरुद्ध सुन्दरलाल को कौंसिल का उम्मेदवार खड़ा कर दिया। मदनमोहन चारुचन्द्र मित्र का अपना बुजुर्ग और बड़ा समझते थे। पर जब एक धुन सवार हो गई तब प्रश्न सामने केवल यही था कि पं० सुन्दरलाल कौंसिल में पहुँच जायँ।

मदनमोहन के भतीजे बुजुर्ग और इष्ट-मित्र बु० कुञ्जबिहारीलाल वकील उनकी इस कार्रवाई पर बेहद नाराज़ थे। वे कौंसिल में पं० सुन्दरलाल का पहुँचना गवारा न कर सकते थे। उन दिनों राजनैतिक और सामाजिक गोष्ठी का नेतृत्व हिन्दोस्तोत्सव के प्रसिद्ध एडीटर पं० बालकृष्णजी के हाथ था। भट्टजी के पास सब लोग एकत्र होकर पं० सुन्दरलाल की उम्मेदवारी के विरुद्ध अपनी आवाज़ उठाते थे और इस सम्बन्ध में मदनमोहन को गालियाँ भी देते थे।

मदनमोहन के ऊपर भट्टजी का प्रेम विशेष था इसलिए उनको स्वतन्त्र झिड़कियाँ और गालियाँ देने का भी अबाध अधिकार था। वे झल्ला कर कहते—क्यों रे मदनमोहन! तुझे यह क्या सूझा है? पं० सुन्दरलाल ने प्रजाहित का कौवता काम किया है। प्रजाहित-साधन में वे कभी भाग नहीं लेते तब तू क्यों उनकी तरफदारी करता है और उनको कौंसिल में लेजाने के लिए प्रयत्न करता है। वे चारु का विरोध करता है जिसने अपनी सारी ज़िन्दगी लोक-सेवा में बिता दी और जो तेरे बड़े खैरख्वाह भी थे। तू चारु के विरुद्ध कोशिश करता है।

मदनमोहन पं० सुन्दरलाल की योग्यता और कर्मपरायणता के विषय में भट्टजी का बड़ी नम्रता से समझाते पर भट्टजी धुरन्धर विद्वान् हो नहीं सकते मत को दृढ़ता से पकड़नेवाले जो थे। वे नाराज़ होकर कहते—तू जो चाहे सो कर, पर इसको कौंसिल में जाने का कोई हक नहीं है। तू इनके पीछे काहे पड़ता है, तू अपने लिए क्यों नहीं प्रयत्न करता।

मदनमोहन मुस्कराकर कहते—भट्टजी, अभी मेरा कौंसिल जाने का समय नहीं आया।

कुछ दिनों तक कौंसिल के उम्मेदवारों के सम्बन्ध में इस तरह की टीका-टिप्पणी गोष्ठी में होती रही। बाद को इनके तरफदारों ने अखबारों में यह चर्चा छेड़ दी और दोनों तरफ से भद्दे और कुरुचि-पूर्ण लेख प्रकाशित होने लगे। मगर यह सब पं० सुन्दरलाल और बाबू के तरफदारों की ओर से हो रहा था। पं० सुन्दरलाल तो स्वयं कौंसिल में जाना पसन्द न करते थे केवल मदनमोहन का अनुरोध उन्हें लगोटे लिये जा रहा था। तब युक्त प्रान्तीय के इस आन्दोलन में अखबारों में घोर एकता तब एक दिन पं० सुन्दरलाल बा० चारुचन्द्र मित्र से मिले और विनीत-भाव से कहा—बाबू साहब! यह जो अखबारों में भद्दे लेख छप रहे हैं उनमें मेरा कुछ भी हाथ नहीं है। मेरी कौंसिल में जाने की तनिक भी इच्छा नहीं है। यह मालवीयजी और मदन का हठ है जो मुझको भेजने का प्रयत्न कर रहे हैं और उन्हीं के हठ के कारण मैं कौंसिल के लिए खड़ा हूँ। चारुचन्द्र मित्र भी पण्डितजी के शील-स्वभाव से विज्ञ थे। उन्होंने जवाब दिया—पण्डितजी, क्या मैं इतना भी नहीं जानता कि आप इस तरह की कार्रवाइयाँ कब पसन्द कर सकते हैं। मगर कौंसिल के चुनाव में ऐसे भद्दे आन्दोलन होते ही रहते हैं।

अन्त में मदनमोहन का प्रयत्न सफल हुआ और पं० सुन्दरलाल कौंसिल के मेम्बर हो गये। कौंसिल का मेम्बर हो जाना एक साधारण घटना थी मगर पं० सुन्दरलालजी पर इसका स्थायी असर पड़ा। इस घटना के बाद पं० सुन्दरलाल देश के कामों में हाथ डालने लगे और उनके द्वारा ऐसे अनेक उपयोगी काम हुए हैं जो सदा सर सुन्दरलाल की कीर्ति का स्मारक बनाए रहेंगे।

सर सुन्दरलाल के कौंसिल-प्रवेश के बहुत पहले से होकर्तके राय बहादुर पं० बलदेवरामजी देश के काम में मदनमोहन की बहुत सहायता किया करते थे। कांग्रेस के कामों में चारुचन्द्र के समान ये भी बहुत परिश्रम किया करते थे और हर बात में अगुआ बनकर और-और से काम करते थे। हिन्दू यूनिवर्सिटी के कार्य में भी बलदेवरामजी शुरू से ही बड़ी धूम-धाम से सहायता और मदद दे रहे हैं। हिन्दू

यूनिवर्सिटी के काम में सर सुन्दरलाल के घराने से मदनमोहन को प्रशंसनीय सहायता मिलती आ रही है। सर सुन्दरलाल ने यूनिवर्सिटी को एक लाख रुपये दान दिया और स्वयं प्रथम कायस्थ-पाठशाला का पद ग्रहण किया था। इस समय भी उनके भाई जस्टिस पं० कन्हैयालालजी हिन्दू यूनिवर्सिटी में अनेकविध काम बड़ी दक्षता से कर रहे हैं। इसका श्रेय मनुष्य की पहिचान और उससे काम लेने के सम्बन्ध में मदनमोहन की विलक्षण योग्यता को है।

मदनमोहन और पं० विश्वम्भरनाथ

प्रयाग में कांग्रेस का अधिवेशन होनेवाला था और उसकी स्वागत-कारिणी सभा के अध्यक्ष चुने गये थे प्रयाग के प्रतिष्ठित रईस पं० विश्वम्भरनाथजी। वे प्रयाग के सुप्रसिद्ध विद्वान और वकील पं० प्रयागनारायणजी कुँजरू के रिश्तेदार थे। संयोग ऐसा हुआ कि उनको मानसव्याधि हो गई। वे मेरी दृष्टि में थे और कांग्रेस के अधिवेशन के दिन भी नजदीक थे। उनकी हालत ऐसी थी कि वे स्वागत-कारिणी सभा का काम कर सकें और कांग्रेस-अधिवेशन के अवसर पर ऊँचे मंच पर खड़े होकर स्वागत भाषण कर सकें। पं० विश्वम्भरनाथजी की इस हालत के कारण प्रयाग के कांग्रेस-वादियों में बड़ी खलबली मची थी। मदनमोहन भी बहुत उद्विग्न थे। एक दिन मदनमोहन घबड़ाए हुए मेरे कोठे पर आये। उनकी आँखें न झपकती थीं और वे विह्वल एवं कातर स्वर से पं० विश्वम्भरनाथजी के विषय में चर्चा कर रहे थे। मैं भी घबड़ा गया। पूछा बात क्या है। बोले भाई! बड़े भाइयों को जल्दी आरोग्य करो। अगर वे कांग्रेस के मंच पर खड़े होने लायक न रहे तो उनकी मौत हुई ही समझो और हम लोगों का सर्वस्व नष्ट हो जायगा।

मैंने डाँटकर कहा—भाई घबड़ाओ मत। घबड़ाने से काम बिगड़ जाता है। पण्डितजी के विषय में चिन्ता मत करो। वे शीघ्र ही इस प्रकार आरोग्य हो जायँगे कि स्वागत भाषण अच्छी तरह कर सकें।

वहीं हुआ भी। पं० विश्वम्भरनाथजी कांग्रेस के सम्बन्ध में अपने कर्तव्य का पालन बहुत अच्छी तरह कर सकते तो समर्थ हो गये। पंडितजी कांग्रेस के अधिवेशन में उपस्थित तो हो सके मगर उनके स्वास्थ्य की तरफ से मित्रों का चिन्ता दूर न हुई। इस विषय में चारु बाबू अत्यन्त सतर्क थे। उनका ख्याल था कि पंडितजी का स्वास्थ्य बहुत सुकुमार है और ऐसी परिस्थिति में उनके पास वैद्य का रहना जरूरी है। उनको इस प्रबन्ध से ढाढ़स विशेष और दिलासा का बल भी रहेगा। चारु बाबू ने मुझे कांग्रेस के अधिवेशन में उपस्थित होकर पं० विश्वम्भरनाथजी के पास बैठने के लिए बाध्य किया। चारु बाबू नकुल की तरह मेरा हाथ पकड़ कर घसीटते हुए मुझे ले गये और स्वागतकारिणी सभा के सभापति की कुर्सी के पास बिठा दिया। पर साधारण परिस्थिति में वह कुर्सी मेरे लिए न थी स्वयं मदनमोहन मुझे वहाँ से उठाकर दूसरी कुर्सी पर बैठा जाते थे। जब मुझे दूर बैठा देखते तब चारु बाबू खफा कर मेरा हाथ पकड़ते और घसीटते हुए फिर ले जाकर मुझे वहीं बैठा जाते। मैं अजीब परिस्थिति में था। मैं अपने कहता कि आप मुझे दूर ही बैठने दीजिए मदनमोहन को मेरा यहाँ बैठना पसन्द नहीं है। मगर वे क्यों मानने लगे। वे मदनमोहन को बुरा-भला कहकर फिर मुझे ले जाकर पं० विश्वम्भरनाथजी के पास बैठा जाते। पं० विश्वम्भरनाथ मेरे साथ बड़े सरकार के साथ पेश आते थे। दूसरे दिन मदनमोहन और चारु बाबू ने परामर्श करके मेरे बैठने के स्थान का परिवर्तन कर दिया। और पंडितजी के पास ही मेरे बैठने का प्रबन्ध कर दिया।

कांग्रेस की बैठक के दो तीन दिन पहले ही पं० विश्वम्भरनाथजी ने मदनमोहन को अपना लिखित स्वागत भाषण देकर कहा—मालवीयजी, इसको आप एक दफा पढ़ लीजिए लेकिन मेहरबानी करके इस पर कलम न चलाइएगा।

मदनमोहन ने नम्रता-पूर्वक जवाब दिया—महाराज! भला मेरी यह मजाल कहाँ कि मैं आप के लेख पर कलम चला सकूँ।

बड़ों के प्रति सर्वदा इस प्रकार विनीतभाव रखना ही मदनमोहन के बचपन का प्रधान गुण है।

हिन्दू-समाज की बैठक

मदनमोहन के गुरु महामहोपाध्याय पं० आदित्यराम भट्टाचार्य महाशय क्वीन्स कालेज में संस्कृत के प्रोफेसर थे। उन्होंने प्रयाग में हिन्दूसमाज की स्थापना की थी। उसकी बैठक हर हफ्ते मुन्शी काशीप्रसादजी के मकान पर हुआ करती थी। मदनमोहन समाज के प्रमुख सदस्यों में से थे। उन दिनों समाजसेवा के कामों में मदनमोहन का प्रवेश नया ही था। मैं भी समाज की बैठक में जाया करता था। मुझे खूब स्मरण है कि समाज-सम्बन्धी आन्दोलन में हालमेवाली लिखा-पढ़ी करने से जब बड़े लोग मुख मोड़ लेते थे तब मदनमोहन कह बैठते थे—इस काम का भार लोग मुझे सौंप दीजिए मुझसे जो कुछ बन पड़ेगा, करूँगा। तब सब लोग एक स्वर से कह उठते कि ठीक है, ठीक है, बहुत ठीक है, मालवीयजी इस काम को बहुत अच्छी तरह कर सकेंगे। मदनमोहन इस प्रकार जिस काम को अपने हाथ में लेते थे उसे पूरा करके छोड़ते थे। सभा, गोष्ठियों में उनके भाषण करने की योग्यता विशेष थी और उनके बोलने का ढङ्ग सभी पसन्द करते थे। परन्तु सबको उनकी विलक्षण शक्तियों का ज्ञान न था। उनके नये होने और कम उम्र होने के कारण कुछ लोगों को उनका बड़े कामों में हाथ डालना अच्छा नहीं लगता था। गोरे गल्हेरा (गोरीलाल) उन दिनों हिन्दू-समाज के सेक्रेटरी थे। कई बार उनकी बातों से मुझे यह विदित हुआ कि वे मदनमोहन के वाद-विवाद को लड़कपन से भरा हुआ और भावना कम होने के कारण शोभाहीन एवं छोटे मुँह बड़ी बात लगाते थे। उस समय किसी को स्वप्न मालूम था मदनमोहन के उस बचपन के शरीर में कैसी विलक्षण प्रतिभासम्पन्न आत्मा छिपी थी।

मदनमोहन और राजबहादुर लाला रामचरनदास

मदनमोहन में बचपन से ही एक जबर्दस्त हठ था कि जिस बात को वे उचित और सत्य समझते हैं उससे उनको कभी कोई डिगा नहीं सकता। इस सम्बन्ध में वे बड़ों की झिड़कियों की भी परवाह न करके अपने मत पर कायम रहते हैं। एक बार राजबहादुर लाला रामचरनदासजी से इनकी बहुत कड़ाई के साथ जवाब सवाल हो गया था। राजबहादुर लाला को क्रोध आ गया था और उन्होंने मदनमोहन को फटकार कर कहा—तुम नहीं जानते कि तुम कौन हो। मदनमोहन का उत्तर बहुत सादा था। उन्होंने कहा—मैं खूब जानता हूँ कि आप बहुत बड़े आदमी हैं और मैं छोटा हूँ। मगर मेरी बातें सही हैं और इस काबिल नहीं हैं कि वे काटी जावें।

मदनमोहन की यह दृढ़ता बनी रही मगर राजबहादुर लाला में परिवर्तन हो गया। बाद को वे ही राजबहादुर लाला मदनमोहन की बातों का उलटा प्यार करने लगे थे और मदनमोहन जिस काम के लिए उनको पकड़ लेते थे वह राजबहादुर लाला को करना ही पड़ता था। प्रयाग में जितनी सभा, कमेटी और कांसिल वगैरह होती थीं उनमें राजबहादुर लाला का ही इन्तजाम रहता था। कभी कभी मदनमोहन राजबहादुर लाला से इतना अधिक काम लेते थे कि वे झुँझला जाते थे और कहते थे कि भाई मालवीय तो मुझको बहुत तंग करते हैं। हिन्दू यूनिवर्सिटी की स्थापना के सम्बन्ध में मदनमोहन ने राजबहादुर लाला रामचरनदास से एक लाख रुपया लिया था। इस दान का कागज रोचक नहीं है।

हिन्दू यूनिवर्सिटी की स्थापना के सम्बन्ध में बनारस में एक महोत्सव किया गया जिसमें भारत के सभी राजे-महाराजे आये थे। इस उत्सव में मैं भी आमन्त्रित था। बनारस जाने से एक सप्ताह पहले राजबहादुर लाला ने मुझसे कहा कि आप बनारस मेरे साथ चलिए और एक सप्ताह के पहले चलिए। राजबहादुर लाला का स्वास्थ्य ठीक न था इस कारण उनकी आज्ञा को मान लेना ही मुझे उचित मालूम हुआ

और मैं एक सप्ताह से पहले ही उनके साथ नवाबगंज के लिए रवाना हो गया। मदनमोहन से जब मुलाकात हुई तब उन्होंने कहा कि राजबहादुर साहब ने केवल पचहत्तर हजार रुपये ही चन्दा लिखा है। मैंने कहा कि मैं कोशिश करूँगा जिससे वे एक लाख पूरा कर दें। महोत्सव के दो दिन पहले राजबहादुर साहब शाम को मेरे कमरे में आकर मेरे पास बैठ गये। मुझसे बोले—लोग मुझे एक लाख पूरा करने को कहते हैं। तब मैं हँसा, कहा—आपने बड़ी गलती की जो छः हजार रुपये ही लिखा। कोई जब दान देता है तब एक रुपया देता है, दो देता है, चार देता है, पाँच देता है। मगर तीन कोई नहीं देता। आपने नाम पचीस हजार दान देना लिखा है जिससे साफ़ ही मालूम पड़ता है कि आप चाहते हैं कि लोग आपसे कहें कि आप एक लाख पूरा कर दीजिए। वह तो आपको देना ही पड़ेगा।

राजबहादुर साहब ने कहा—क्या करूँ जी, हम एक छोटे से रोज़गारी हैं।

मैंने कहा—ये सब व्यर्थ की बातें हैं आप बहुत शीघ्र एक लाख पूरा कर दीजिए।

राजबहादुर साहब उठकर अपने कमरे में चले गए।

दूसरे दिन सवेरा होते ही उन्होंने मुझे ज़ोर से पुकारा और कहा—जल्दी तैयार हो जाओ लालबीबजी के यहाँ चलना है।

मैं भी झटपट स्नान और सन्ध्या-वन्दन करके तैयार हो गया। राजबहादुर ने फिर पुकारा, कहा—जल्दी चलो।

मैं चटपट उनके साथ हो लिया और मदनमोहन के निवासस्थान पर पहुँचा।

वहाँ मालूम हुआ कि मदनमोहन की तबीयत अच्छी नहीं है और उनसे मिलने के लिए आये हुए अनेक राजे-महाराजे फेरे लौटाये जा रहे हैं। हम लोगों को भी यही जवाब मिला कि लालबीबजी आज किसी से न मिलेंगे। जब हम लोग लौटने लगे तब चि० मुकुन्द लालजोब ने कहा—अरे आप ठहरिये बाबू से आप के आने का समाचार तो कह

हैं। थोड़ी देर बाद ही मुकुन्दजी ने लौट कर कहा—चलिए आपको बुलाते हैं। अन्दर जाकर देखा बहुत सा गरम कपड़ा पहने मदनमोहन बैठे थे। मैंने इशारे से बताया कि अब लाख पूरा हो चुका चाहता है। मदनमोहन ने कहा—हाँ, मालूम तो पड़ता है।

इसके उपरान्त एक ही मिनट की बातचीत में राजबहादुर साहब ने ७५ हजार के स्थान पर एक लाख रुपये देने का वचन दे दिया। तब एक नई अड़चन उपस्थित हुई। लाख रुपया देनेवाले राजा रईसों की नामावली वाइसराय महोदय स्वयं महासभा में पढ़कर सुनानेवाले थे और वह लिस्ट छपकर तैयार हो चुकी थी। मदनमोहन के सामने यह प्रश्न उपस्थित था कि राजबहादुर साहब ने एक लाख रुपया भी दिया और लाख रुपया देनेवाले लोगों की नामावली में उनका नाम न छपने से वाइसराय महोदय उनके नाम को किस प्रकार घोषित करेंगे। मदनमोहन ने फौरन अपने प्राइवेट सेक्रेटरी को बुलाया और बेंट साहब को एक इबारत लिखकर आज्ञा दी कि तार द्वारा फौरन यह खबर हिन्दुस्तान के समस्त अखबारों में भेज दी जाय। ऐसा ही किया गया और थोड़े ही समय में राजबहादुर साहब का नाम देश के कोने कोने में गूँजने लगा।

जर्मन प्रोफेसर डा० ड्यूसेन और मदनमोहन

बहुत दिन हुए एक बार प्रयाग में जर्मनी निवासी संस्कृत के प्रसिद्ध विद्वान्, वेदान्तशास्त्र, महासूत्र और उपनिषदों के धुरन्धर ज्ञाता एवं शंकर वेदान्त के माननेवाले प्रोफेसर डूसेन (ड्यूसन) एक बंगलेवाले पंचार के घर एक होटल में ठहरे थे। वे संस्कृत में बहुत उत्तम भाषण करते थे। उनसे मिलने के लिए पं० लक्ष्मीनारायणजी व्यास, पं० श्रीकृष्ण जोशी, पं० सन्तू-प्रसादजी तथा मैं और भी अन्यान्य लोगों के साथ उनके निवासस्थान पर गये थे और घण्टों बातचीत के उपरान्त यह तय हुआ कि कायस्थ पाठशाला के मैदान में वेदान्त के ऊपर प्रोफेसर डूसेन का भाषण हो। नोटिस बाँटे गये और प्रोफेसर साहब का भाषण संस्कृत में बड़े धूम-धाम से हुआ। यूरोपियन-हैटे हुए भी वे पण्डितों की तरह बैठ कर भाषण

करते थे। व्याख्यान समाप्त होने पर कार्यकर्त्ताओं ने मद्रास के वेदान्त का खण्डन और स्वामी दयानन्दजी सरस्वती के वेदान्त का मंडन करने के निमित्त पं० भीमसेनजी को खड़ा किया। पं० भीमसेन ने अपने भाषण में शास्त्रार्थ खूब खण्डन-मंडन भी किया। मदनमोहन को यह कार्रवाई अच्छी न मालूम हुई। उनकी यह बात खटकने लगी कि यहाँ विदेश से एक सज्जन ऐसा आकर उपस्थित है जो हमारे गुरु को परखना है और उसे प्रसन्न करना चाहता है और हम खंडन मंडन के फेर में पड़कर उसके सामने बहुत खराब उदाहरण पेश कर रहे हैं। भीमसेन का प्रतिवाद करने के लिए मदनमोहन ने बैठे बैठे एक कागज़ पर संस्कृत में कुछ लिखा और मुझे सुनाने लगे। पं० सुन्दरलालजी भी पास ही बैठे थे। वह लेख सुनकर वे मुस्कराने लगे थे। वह दृश्य मेरे हृदय पर एक चित्र की तरह अंकित है। मैं अपने सामने बैठे हुए पं० सुन्दरलालजी का वह मुस्कराता रूप देख रहा हूँ।

पं० भीमसेन के व्याख्यान के उपरान्त मदनमोहन का व्याख्यान हुआ। उनका व्याख्यान बहुत ही सुन्दर और मार्के का था। उन्होंने अपने भाषण में इस बात पर अफसोस जाहिर किया कि कहाँ जर्मन देश और कहाँ भारतवर्ष। इतने दूर से एक प्रसिद्ध विद्वान यहाँ आकर हमारे प्राचीन और महत्वपूर्ण वेदान्तशास्त्र पर व्याख्यान देवे और हम लोग उसका खंडन करने के लिए खड़े हों। कितने दुःख और लज्जा की बात है। मुझे इस कार्रवाई के ऊपर बड़ा दुःख है। सभा समाप्त होने पर देवसेनजी जब चलने को तैयार हुए तो डा० अविनाशचन्द्र बनर्जी ने तीन बार जोर जोर से 'डा० गुरुदेव, हिप, हिप, हुर्रे', का नारा लगाया। सारा मंडल हिप, हिप, हुर्रे की आवाज से गूँज उठा।

मदनमोहन जिस प्रकार अँग्रेज़ी के विद्वान हैं उसी प्रकार संस्कृत साहित्य के भी धुरंधर पण्डित हैं। वे वेद, गीता, रामायण, महाभारत, और श्रीमद्भागवत का बहुत दिनों से अब तक पाठ करते आये हैं।

पश्चात् कालिज में जब वे शास्त्रार्थ निर्णायिक पद पर थे तब इन्होंने अपना भाषण न लिखा था न छपवाया था। अपने अँग्रेज़ी के भाषण का

उन्होंने गीता, भागवत, महाभारत और अनुस्मृति आदि के ग्रन्थों से मनोकूल किया था, उनको अखबारों में पढ़कर मदनमोहन के परमगुरु महामहोपाध्याय पं० आदित्यराम भट्टाचार्य बहुत प्रसन्न होते थे और कहते थे—क्यों न हो, मदनमोहन ब्यास कर बैठा है न! वह शास्त्रोक्त अक्षर कहाँ जा सकता है।

तपस्वी मदनमोहन

मदनमोहन साक्षात् बालक तो हैं ही साथ ही तपस्विता भी इनमें कम नहीं है। मालूम पड़ता है कि अहिंसा और स्वाध्याय आदि धर्म इनका बहुत बड़ा पक्का है। मैंने कई अवसरों पर इस बात का अनुभव किया, मगर फिर भी बूढ़ों लोग जरा-जरा बातों कहावत के अनुसार मदनमोहन की इस विशेषता की ओर मेरा ध्यान विशेषरूप से कभी आकर्षित नहीं हुआ। फिर भी कभी कभी अवसर पड़ने पर अन्तरात्मा में कुछ भाव उठते हैं मदनमोहन गाढ़े अवसरों पर काम आ जाते हैं।

इन्फ्लुएन्जा के अवसर पर मेरे भतीजे चि० काशीप्रसाद को निमोनिया सम्बन्धी बुखार था और एकदम बेहोशी का दौरा होगया। गोदान वगैरह भी करा दिया गया। उस समय मेरी अवस्था पागलों की सी थी। मैंने आदमी भेजकर मदनमोहन को बुलवाया, कह दिया कि जहाँ मिलें उनको फौरन लेकर आया। इसके बाद मैं चिकित्सकों के पास दौड़ा। डा० सुरेश को लेकर आया। मदनमोहन वहाँ गये थे। उन्होंने मुझे सान्त्वना देते हुए कहा—घबड़ाने की बात नहीं है। काशी अच्छा है। मैंने जब आकर देखा तो विश्वनाथ ब्रह्मचारी ने डा० अनन्तप्रसाद की बताई हुई बूँद के भीतर बफारा देने की दवा शुरू कर दी थी। डा० सुरेश ने भी उस बफारे को जिसमें कुछ दवा का भी योग था, पसन्द किया और कहा कि इसी दवा से काशी अच्छे हो जायेंगे।

इस अवसर पर मुझे यही विचार हो रहा था कि दवा वगैरह एक तरफ अगर मदनमोहन मेरे यहाँ आ जायँ तो काशी सुखी हो जाय।

मदनमोहन कोई वैद्य डाक्टर न थे। मगर मेरे मन में जो बातें बही थीं वे पूरी उतरीं।

इसी प्रकार की एक दूसरी घटना पहले घट चुकी थी। उस समय लाजवीरजी के मझले भाई पं० जयकृष्णजी की हालत संग्रहणी के रोग से बहुत बिगड़ी थी। बड़े बड़े वैद्य डाक्टरों ने जवाब दे दिया था। उस समय मदनमोहन हमारे पास दौड़े आये और बड़े जोर से हुंकारे कहा—"मैंने सुना है कि वैद्य का आपने भी जवाब दे दिया है। बड़े मूर्ख को बाप है। उठो, चलो हमारे साथ और उनकी दवा आरम्भ करो। वे बिल्कुल अच्छे हो जायेंगे। मुझे ऐसा मालूम पड़ा जैसे भगवान् कृष्ण अर्जुन से कह रहे हैं—"क्लिब्यं मा स्म गमः पार्थ! युद्धाय कृत-निश्चयः!" अब किस हिम्मत से कह देता कि उनके बचने की कोई उम्मीद नहीं। इसलिये सीधे चुपचाप मदनमोहन के साथ हो लिया। वैद्य जी साहस और आत्मबल बढ़ गया था। और हिम्मत बढ़ी कि दवा दे दूँ। मैंने दवा करना आरम्भ कर दिया। धीरे धीरे मदनमोहन के आत्मबल ने सहायता की और पं० जयकृष्णजी आरोग्यलाभ होने लगे। धीरे धीरे जहाँ उनको लेटाने आस पास दूध हजम होना कठिन था वहाँ उनको १६-१८ सेर तक दूध हजम होने लगा। इस बीच में उन्हें ऐसा बल हुआ कि वे अखाड़े में गये और एक पहलवान को पछाड़ा। इस घटना की खबर दो दिन तक न दी गई क्योंकि उनके कमर में हूक हो गई थी।

उसी समय कि० कृष्णकान्तजी लाजवीर पं० जयगोविन्द के कोई घर से पत्थर के ऊपर गिरे। बड़ी गहरी चोट आई थी। उस अवसर पर उनकी जान पर आगई थी। मगर लाजवीरजी और उनके कुटुम्ब के पुण्य प्रभाव से वे शीघ्र अच्छे हो गये। कृष्णा के पिता पं० जयकृष्णजी को इस घटना का कोई खबर न दी गई। वे बीमार तो थे ही इस समाचार को पाकर उनका विशेष बढ़ा जाने की आशंका थी।

एक दिन ऐसा हुआ कि मदनमोहन मेरे यहाँ आये थे। वे बहुत दुर्बल मालूम पड़ रहे थे। उनके चेहरे का रंग भी मुझे अच्छा न

मालूम पड़ता था। यह भी मालूम पड़ा कि वे बाहर आनेवाले हैं। उनके स्वास्थ्य की ओर से मैं चिन्तित था। मुझको खटकता तो था ही गाड़ी के समय पर मैं मदनमोहन से मिलने के लिए स्टेशन पर जा पहुँचा। गाड़ी के पास दूर तक खड़ा रहा। बहुत से आदमियों के साथ जब वे आये तो मुस्कराकर हाथ उठाया और प्रश्न किया कि तुम कैसे आये। मैं चकित था। मैंने साहस करके पूछा—कौनसी जड़ी की पुड़िया तुमने चाटली या कौनसा अभ्यास तुमने कर लिया कि जिससे तुम एक दम हट्टे-कट्टे और प्रफुल्ल बदन हो गये हो।

उन्होंने हँसकर कहा—हाँ कुछ कर लिया।

इससे मुझे यह मालूम पड़ा कि उनके कुछ ऐसे सम्बन्ध हैं जिसके करके वे ताजे और चङ्गे हो जाते हैं। मैंने इनमें आत्मबल, प्रसादगुण, भगवद्भक्ति एवं भगवत्-परायणता बहुत पाई है।

मन्त्रदीक्षा

एक दिन मेरे पुत्र चि० कृष्णानन्द पाण्डेय को देखने के लिए मदनमोहन घर पर आये थे। उन दिनों उनको नई धुन सवार थी। उन्होंने लोगों को दीक्षा देने का काम शुरू किया था। मैंने पूछा—मदनमोहन, तुमने काशी और कलकत्ते में सर्व जातियों को दीक्षा देना शुरू कर दिया है। तुम तो स्वामी दयानन्द महाराज से भी एक कदम आगे बढ़ा चाहते हो।

मदनमोहन ने हँसकर कहा—हाँ जी मन ने जल गया और मन्त्र का काम कर उठा।

मैंने फिर कहा—मगर तुम्हारा मन्त्र क्या है। मुझसे तो तुमने कभी उसका जिक्र तक नहीं किया।

तब उन्होंने ॐ नमो नारायणाय ॐ नमः शिवाय आदि मन्त्रों के विषय में संकेत में किन्तु महत्त्वपूर्ण बातें की और चले गये।

समस्त मानुष समाज को एकदम ऊँचा उठाने की चिन्ता की प्रेरणा से ही मदनमोहन ने दीक्षा देने का काम उठाया था। समाज में धार्मिक

भावों की रक्षा, वृद्धि एवं उसके प्रचार के उद्देश्य से ही मदनमोहन ने विशाल कुम्भ के अवसर पर धर्म-सम्बन्धी अनेक पुस्तकें हिन्दी संस्कृत में छपा कर मुफ्त वितरण कराई थीं।

मदनमोहन का सब जातियों को अवसरोचित मन्त्रों को जपने के लिए उत्साहित करना पण्डितों को अच्छा नहीं लगा। भारत के प्रमुख पण्डितों ने उनके इस दोषा कार्य का घोर विरोध किया। मगर मदनमोहन को देश का कल्याण इसी में जान पड़ा कि सब जातियाँ मन्त्रों का जप करें। अछूतोद्धार का यह सहज सुनहरा पाकर उससे लाभ न उठावें, यह मदनमोहन की क्षमता से बाहर था। फिर भले ही सारा संसार इसका विरोध क्यों न करे। महापुरुष जब एक निश्चय कर लेते हैं तब विरोधों का सामना करते हुए अपने निश्चय के अनुसार कार्यवाई करते ही चलते हैं।

कौटुंबिक

मदनमोहन के कुटुम्ब से मेरा घनिष्ठ सम्बन्ध रहा है। परमात्मा की कृपा से इनकी सन्तान एक से एक प्रतिभा-सम्पन्न, योग्य और विद्वान हैं। मालवीय कुटुम्ब के पुण्य से मदनमोहन को गृहस्थ धर्म का पालन करनेवाली सहनशीला, दुख में भी सुख माननेवाली धर्मपत्नी मिली है। मदनमोहन की माता (अम्मा) ने मुझसे इस महिला का बखान जिस प्रकार किया था, वह मुझे खूब स्मरण है। सचमुच जिस कुटुम्ब में मदनमोहन की स्त्री जैसी महिलाएँ रहती हैं, वहीं परमात्मा का निवासस्थान बन जाता है।

नमुन्धरेव भूमिष्ठो यत्र सर्वं सहा गृहे।
सुखे दुःखे निर्विकारा तत्रैव रमते हरिः॥

शिवराम पाण्डे

वन्दनीय विश्वविद्यालय

पद

जयतु विश्वविद्यालय काशी ।
सुरसरि-पावन-सलिल-सुसिञ्चित
विश्वनाथ वर विभव विकाशी ।
वेद-विहित पथ पथिक नीतिरत
प्रीतिपूत परहित व्रतधारी ।
भवसरोवरा वैजोवन रत
जनजन में जीवन संचारी ।
भारतीय भारती वर अवन
भरत कुमार विभूति विलासी ।
भावुकता मन्दिर कल केतन
भक्ति-निकेतन शक्ति उपासी ।
प्राची दिशा प्रतीची प्रतिभा
चारु मूल सुविचार प्रचारी ।
धर्म निरूपण निपुण आलयन
शम गुरुता गौरव अधिकारी ।
निगम विभव आगम अनुभवरत
विशद उपनिषद पद अनुरागी ।
कपिलादिक कल्पना अलङ्कृत
बुद्ध जितादि विराग विरागी ।

व्यासदेव वचनावलि-विलसित
वाल्मीकि चरितावलि-लोकी।
नारद-वीणा-नाद-निनादित
साधक सिद्ध साधना साधी।
सफल काम कविता मधुरतम
लोक लाभ लोलुप कृतिशाला।
महिमा धाम महान कर्मरत
मानस उपवन मंजुल माली ॥६॥

फिर भारत का भाग जगेगा।
काशीधाम विश्वविद्यालय
देख देख उमंगेगा।
मिले पूर्व विशाल वैभव
मनसुमन-मानस उगेगा।
जन जन लहलहाता होगा
जन जन में सुरभित लगेगा।
जाति-हितों के रुचिर रंग में
बहु रुचि सहित समाज रँगेगा।
देश प्रेम के पूत पान में
प्रीति सरस प्रति अनुज पगेगा।
सुमति शुक्तिका से निकल-बाहर
हलित एकता कलन लगेगा।
दलन हेतु खल वृन्द विपुल दल
बल गोला बन चपल दगेगा।
परम शान्ति अति कान्त गगन में
परम प्रमोद मयङ्क उगेगा।
सब सुख मानस में निवास कर
हित गोदी भर हृदय लगेगा।

कहीं न दासता दीखेगा
किसी को न छवा दुख छलेगा।
भारतीय जगजाग भाव का
विजय-पत्र महिमय टँगेगा ॥२॥

काशीधाम विश्वविद्यालय।

हे जन-अभिनन्दित बुध-वन्दित
सद्धि हैं कलद कामधेनुपम।
विभागाध्यक्ष-निदेश परिपालक
अतिसरलतासिन्धुल्ल सुधनिलय।
कर्मनिरत नवनीतिविधायक
भारतीय सब जन सम्बन्धन।
गिरा शक्ति गुण ग्राम गौरवित
नारदादि मुनिवृन्द सब सवाय।
विविध देश वर विद्या विलसित
कलित कलाकर परम कलिकलय।
सकल सिद्धि साधन सुखभाजन
भुवना सदृश सरसता सचय।
अब अभिराम भाव परिपूरित
महिमा भवन अबोध अनामय।
नृपकुलकर परिपालित लालित
नीतिनिपुण नेता कुल निर्भय।
जन अनुभूति चार कलाधायक
सुरपुर सकल सम्पदा विनिमय।
भारत आशा नवविकासकल
भारतावली भरित सुंदु हृदय।
विपुल लोक जयनादविलासित
सुरसमर्चित मधु कुसुमचय ॥३॥

विश्वविद्यालय-प्रशस्ति

गीतिका

अनुभूति भवन विभूति वैभव
भुवन मन भावन धरें।
कर सफलतालय सकल साधन
विफलता मति की हरें।
सुरसरित शुचि तम सित सलिल त्रिवलित
अवनितल में बसे।
कर लाभ सुरगुरु सम विशद पद
शारदा सेवक लसे।
शिवधाम काशी में कसे तब
ज्योति ज्ञान जन में जगे।
रविसम विशेष विकास आप से
भारत भर आरतजन लगे।
आनन्द घन में दुखदल को
वह सजल फल दल मिले।
जिससे सफल हो मनुज-जीवन
कलित उर कलिका खिले।
तप भूमि में तप तिरल 'तापस'
हो तपोबल से बला।
कर दे सुस्थित दुख विजित स्थिति को
विवर विरदावलि भला।
बहु विदित विद्यापीठ में वह
सुमति सरि बहती रहे।
जिसके प्रवाह प्रवाह में
सब विषयमल विपद बहे।
महिमा मनोहर जहनमोहन
मोहितों मोहित करे।

भव भविष्य विभव व्यवहार
प्रतिभाव में अनुभव भरे।
सफलित फलित गौरवशालित
शति सुलित चरित सुकृत अने।
बुध जन विबुध जब बना
हिन्दू विश्वविद्यालय बने ॥४॥

द्विपद

सकल संसार सुख के लोचनों का मनुज तारा।
बनारस विश्वविद्यालय बनेगा विश्व का प्यारा ॥१॥
इसे शिव सिद्धियाँ देंगे बनेगा बुद्ध वैभव वह।
परम पावन बनावेगी इसे सुरसरि ललित धारा ॥२॥

यहाँ अज्ञानतम हर कर
उदित वह ज्ञान-रवि होगा।
कि जिसकी ज्योति पाकर
जगत्‌गायेगा जगत सारा ॥३॥
यहाँ पर मिल योगपाणि को
वीणा बजेगा वह।
कि जिसके नाद से होगा
धरातल स्वर्ग-सा न्यारा ॥४॥
जुटेंगी वा जिसे बहु योगियों
की बेजुड़ी ईंटें।
बनायेंगी शिवा देवी यहाँ
यह गौरवित मारत ॥५॥
यहाँ की दिव्यता से दिव्य
इतना भूमितल होगा।

जिसे अवलोक दिव को
भूल देगी देवसमदारा ॥६॥
अलग-सा वह रसायन
कर सकेगी हम नहीं जिससे।
सुधा जैसा मधुर बन जायगा
अमृत सलिल सारा ॥७॥
यहाँ पर सर्वजन अनुरञ्जना
शिक्षा मिलेगी वह।
करेगी जो धरा का धन्य
वैदिक सभ्यता द्वारा ॥८॥
यहीं उस वन्दनीया शक्ति की
आराधना होगी।
कि जिसके हाथ से अब दम्भ दानव
जायगा मारा ॥९॥
यहीं साधनिरत नर वह
दिव्यवरदान पायेगा।
पहन जिसको कभी जीवन-समर
में भय नहीं हारा ॥१०॥
यहीं पर फिर बजेगी वह
मुरलिका एक मोहन की।
द्रवेगा सुन जिसे पत्थर
बनेगा फूल संसारा ॥११॥
यहीं वरणीय विद्यापीठ
होगा सर्वविद्या का।
यहीं गुरुतानुरागी का
बनेगा नव गुरुद्वार ॥१२॥

अयोध्यासिंह उपाध्याय

गवाक्षबन्धः

आर्या

मयदर्शितजननयनानन्दो मोहज्ञपबलशतहर्म्यैः ॥
जीवेच्छतं समा नवशक्तियुतो मानकमलरविः ॥२॥

न्यासः

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विद्याविशारदर्शनलब्धितो जननयनानन्दो नवाक्षरं मंत्रासुरस्य दर्शितो येन, मयासुरेण पूर्वं जलस्तम्भकरी सभा निर्मिता वर्षेरोगाय इत्या, तत्र जगद्विध्वंसककुलहुपलाशको द्वेषाग्निः प्रादुर्भूत । अत्र मन्त्रविचारसंकलितायां सर्वजगद्मोहकविद्याप्रादुर्भाव । ईदृशा नवनवाविष्कृतविद्याकलानां संग्राहक । आर्याणां हिन्दवासियानां सम्मानकमलस्य प्रकाशकः, सूर्य इव अयं स्वीयाय शतं समा पुरुषवरमानुषकालं जीवेत् जीवतु । अस्या आर्याया गवाक्षबन्धसम्बन्धिनिर्वचने प्रसिद्धैर्वर्णैः सङ्गाहितानां महाभाग चिरं जीवतु इत्याशास्ते लेखकः

रीवेकुलोत्पन्नः श्रीधरसुतः प्रभाकरशर्मा

शुभाशंसा

मन्यन्ति यत्र मतिमन्यशतैर्महार्थान्
हालाहलामृतमयान् निगमागमाब्धीन् ।
मन्दादरा परपरीक्षितवर्त्मनाशु
नानाविधाध्वभिनिवेशिभिरप्युरीणाः ॥१॥

आधन्ति मेदुरमदा मतयो न यूनां
लक्ष्येन गोर्गुणगणेन वशीकृतानाम् ।
वीतस्पृहाः परनिधानविधानकामा
यत्रार्जयन्ति कवयः कवयश्च विद्याम् ॥२॥

श्रीवातुरार्यकुलनन्दनसंस्कृतीर्णा
वेणाप्यगम्यविभवेन विलासिनीनाम् ।
लाभ्यस्पृशा सपदि मित्रदृशा विशाखान
कालानुगान् परगुणांश्च समीक्षितो यः ॥३॥

रम्याणि यस्य भवनानि भृशं भवन्ति
यद् भारतीरतिकराणि विभासहेतोः ।
शास्त्राणि सारसमवानि वरीवरीतुं
कीलालमेव विमलं किल वीर्यवत् तत् ॥४॥

सत्येन शीलसुभगेन दृढव्रतेन
दाक्षिण्यतो रुचिरवाग्विभवेन धाम्ना ।
वृत्या च रञ्जनकृतोपकृतिप्रलर्ष-
द्विष्णेन यस्य जनको नतु कस्य नार्य्यः ॥५॥

क्रोशशतोऽपि नो गमयेत् स देशे
स्त्रीजानुरागरहितं न हितं हि तत् स्यात् ।
रक्षांसि यान्तु विलयं सपुपद्रवन्ति
हेरम्बतातचरणाम्बुजसप्रसादात् ॥६॥

कंशकप्रसादमिश्रस्य